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THE STUDY OF CONGENITAL ANOMALIES BY THE EPIDEMIOLOGIC METHOD*

With a Consideration of Retrolental Fibroplasia as an Acquired Anomaly of the Fetus

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IN ANCIENT times the birth of a deformed baby was commonly believed to be an omen, a supernatural judgment or the work of the devil. These attitudes were gradually discarded, and with an increased understanding and application of mendelian laws, anomalies present at birth were commonly interpreted as manifestations of genetically defective germ plasm. A succession of events during the past ten years, initiated by Gregg's observations[1] in 1941 on the role of rubella as a cause of congenital cataract,[2] has brought appreciation of the fact that congenital anomalies may be acquired as well as inherited. At about the same time Levine and his co-workers[3] clarified the genetic and acquired mechanisms of erythroblastosis; shortly thereafter, Terry[4] pointed out the association of a noninherited form of blindness, retrolental fibroplasia, with premature birth. Not only have these contributions opened a whole field for investigation, but also they offer hope that acquired anomalies of the embryo, fetus and premature infant may be prevented by application of an increased knowledge of their epidemiology.

EPIDEMIOLOGIC APPROACH TO CONGENITAL ANOMALIES

Disease may be approached in only three ways: in the individual by clinical or pathological methods; in the laboratory by technical or experimental methods; and in the group by epidemiologic and statistical methods. The contribution of one of these methods is no substitute for contributions by the other two. A first-hand knowledge of post-rubella anomalies, for example, can be gained only at the bedside. A knowledge of risks, on the other hand, of what happens to the babies of women who contract rubella during pregnancy can be gained only from such clinical data coupled with epidemiologic observations made in the field.

The fundamental principle of epidemiology, recently the subject of detailed exposition by Gordon,[5] is the concept of three primary forces — agent, host and environment — interacting to produce a mechanism within the body of the host that results in the manifestations of disease. When this principle is applied to intrauterine disease, the host will necessarily be the human organism as it exists between fertilization of the ovum and birth. It is evident that the mother and placenta together constitute a protective, buffering environment interposed between the embryonic host and injurious agents of the true external environment.

The task of epidemiology is to quantitate the movement of disease through various populations and define specific causative factors as they relate to the host and environment quite as thoroughly as those which relate to the agent.[6] To know only that the *Spirochaeta pallida* (*Treponema pallidum*) causes interstitial keratitis or that rubella causes congenital cataract is not to know enough to prevent those conditions. A working knowledge of the epidemiology of syphilis and rubella is needed — a practical knowledge of human characteristics as well as the bacteriologic forces that enter into the production of the two ocular defects.

CONGENITAL ANOMALIES

Frequency

The relative importance of congenital anomalies as a cause of death is shown in Baumgartner's[7] analysis of the 1947 infant mortality statistics of the United States, for intrauterine disease can be partially quantitated in terms of fetal and infant wastage: "The five leading causes of infant deaths in 1947 and the infant mortality rates for each were: premature birth, 11.1; congenital malformations, 4.6; pneumonia and influenza, 3.6; injury at birth, 3.5; and asphyxia and atelectasis, 1.6. These leading causes accounted for 75.5 per cent of all the infant deaths of 1947."

The problems of premature birth, intrauterine asphyxia, stillbirths and congenital malformations are parts of a common field of investigation. MacGregor[8] found that some 20 per cent of stillbirths and another 10 per cent of neonatal deaths were

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attributable to gross congenital malformations. Mall's[9] comprehensive researches indicate that the great majority of abortuses are malformed and that not more than 80 per cent of pregnancies terminate in the birth of normal infants; Stockard[10] concluded that "defects in construction must be considered a disease which causes the death of about 23 per cent of the human race before or

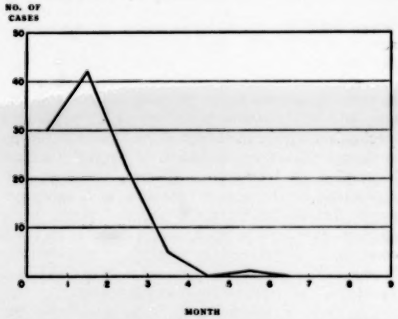

FIGURE 1. *Congenital Anomalies of the Eye, Ear and Heart in 100 Cases, All Types, Arranged by Month of Pregnancy When Rubella Occurred. (Based on Collected Case Reports, 1943–1947.*[30])

shortly after the time of birth." When, in addition to lethal defects, it is considered that a significant proportion of infants judged to be normal at birth are found later in life to suffer from hidden anomalies of the skeleton or soft tissues, the size and shape of the whole problem of congenital disease begins to be apparent.

The beginning and the end of pregnancy are the most critical periods as far as survival of progeny is concerned. This is indicated by the distribution of 10,000 fetal deaths reported from New York City in 1944 into two principal concentrations, one in early pregnancy and another toward term.[11] Probably, these are also the two most critical periods for the development of acquired defects. Proof of the point awaits reporting of maternal disease and congenital defects in such a way that the two may be effectively correlated from information on birth and death certificates and medical records. Existing knowledge of genetics[12] and embryology[13] is to be taken into account in the evaluation of congenital anomalies as manifestations of antenatal disease. The present need is for vital statistics that will indicate the causes and timing of intrauterine deaths and disabilities. An answer to the question "When do acquired malformations originate?" is assuredly part of the answer to the question "How do such conditions originate?"

Role of Fetal Host in the Pathogenesis of Post-Rubella Anomalies

At no other time of life is the host of more potential importance in the determination of disease than in the prenatal period. Indeed, developmental changes follow each other with such rapidity during the first two months of prenatal life that a greater anatomic and physiologic gulf may exist between the organism and its predecessor of a week or two than is ordinarily found between species. During the first week of conception, for example, neither the trachea nor the esophagus has come into being, whereas at the fourth week their primordia are separated by a mere fraction of a millimeter, and much of the pulmonary tract remains undifferentiated. Conditions are right for a minor focal defect in the differentiating partition to result in a persistent fistulous opening between the trachea and esophagus. A few weeks or a few months later, when the forms and contours of these organs are completely altered, a tracheoesophageal fistula could hardly arise as a primary developmental defect. Such knowledge of the embryonic host is the contribution of embryology.

Proof that the changing structural and functional characteristics of the fetus have a measurable

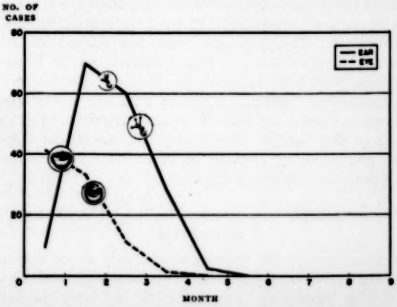

FIGURE 2. *Congenital Anomalies of the Eye and Ear. (Based on Collected Case Reports, 1943–1947.*[15-24])

Cases of blindness (cataract) and deafness are arranged by month of pregnancy when rubella occurred. Cataracts date from the period of active differentiation of the primary fibers that fill the optic cup, as diagramed, between the fifth and eighth weeks; deafness dates from the period of development of the cochlear coil, as diagramed, between the seventh and tenth weeks of fetal life.

influence on the outcome of intrauterine disease is given by published data on anomalies following rubella in pregnancy (Fig. 1)[2, 14-24] The well known relation between first-trimester infection and congenital deformities of the eye, ear and heart is shown for 100 babies born subsequent to maternal rubella. Separation of the data establishes what the skewed distribution of anomalies in early preg-

nancy implies: that the phenomenon is a manifestation of a variable susceptibility of the fetus. If the stages of pregnancy at which maternal rubella was followed by congenital cataract are plotted for comparison with the stages when it was followed by congenital deafness, two different curves (Fig. 2) emerge. The mean critical period for cataract is at 1.17 months, and for deafness at 2.17 months of prenatal life (Table 1). The difference is significant, and the fact can hardly be explained as due to any changing virulence of the virus or variation in the external environment regularly operating at the fifth or ninth week in a series of unrelated pregnancies. The determining factor is to be sought within the maternal organism or embryonic host and the embryologist is able to provide a reasonable interpretation of the observed facts. Thus, Ida Mann[25] has pointed out that the period of active differentiation of the primary fibers that fill the optic lens lies between the fifth and eighth weeks, whereas the formative period for the cochlear apparatus lies between the seventh and tenth weeks. Presumably, the actively differentiating cells of the eye and internal ear are more vulnerable to injury than undifferentiated or fully differentiated cells. This inference is compatible with two other clinical observations: the infrequent association of cataract and deafness in the same person[14-24] and the finding that the deafness is by no means always total. So-called "islands of hearing" are usually observed,[26] a fact consistent with knowledge that development of the cochlear coils is a progressive process,[12] with partial destruction as much of a possibility to be considered as total ablation.

Table 1. *Rubella in Early Pregnancy and Congenital Malformations of the Eyes and Ears.**

Duration of Pregnancy when Infection Occurred†	Cases of Congenital Cataract	Cases of Congenital Deafness
mo.		
0-0.9	41	9
1.0-1.9	33	70
2.0-2.9	11	60
3.0-3.9	1	28
4.0-4.9	0	2
Totals	86	169

*Based on collected case reports, 1943–1947.[9, 14-24]

†Mean month of infection when congenital cataract resulted = 1.17 ± 0.76; mean month of infection when congenital deafness resulted = 2.17 ± 0.85; difference of the means = 1.0; standard deviation of the difference = 0.1. Critical ratio = 9.0.

These observations on rubella demonstrate that the basic principles of animal teratology*[27] operate in the pathogenesis of acquired human anomalies. A single inciting agent may give rise to many different kinds of malformation, the particular type being determined by the stage of embryonic development at which the injurious agent acts.

Figure 3. *Congenital Anomalies Experimentally Produced in the Mouse Fetus: Anencephaly Following Anoxic Anoxia for Five Hours on the Eighth Day of Gestation; and Cleft Palate [Compared with Normal Palate of Litter Mate] Resulting from Anoxic Insult on the Fourteenth Day. (Adapted from Ingalls, Curley and Prindle.[28])*

Multiple Causation of Congenital Anomalies (Significance of Mongolism)

One of the governing principles underlying acquired defects of lower animals was revealed by Stockard's[27] experimental work on the fish embryo. By demonstrating that exposure of the egg at about

*These are principles of biology, and the science of teratology is merely the science of antenatal pathology. Ballantyne[29] defines the fundamental principle of teratology by the statement that "embryonic pathology means abnormal formation."

the fourteenth hour after fertilization to weak solutions of chloroform, ether, alcohol or magnesium sulfate generally resulted in cyclopia, he established the fact that a stage-specific defect may be induced by more than one kind of agent. The validity of this principle for human beings is given strong support by evidence that mongolism, like cyclopia in the fish, is a stage-specific deformity due to a diversity of maternal (environmental) disturbances.

FIGURE 4. *Conjoined Twins — Unquestionably, the Deformity Is Determined before the Fetal Stage of Development. (Reproduced from Black[26] by Permission of the Publishers.)*

The inference that mongolism is determined between the seventh and ninth weeks[29] has been confirmed by Lowe's[30] ophthalmoscopic studies of the eyes of 52 mongoloid persons. Arcuate lens opacities were among the "earliest consistent abnormalities seen in the eyes." Because of their position within the nuclear portion of the lens, Lowe concluded that their genesis lay in relation to an abnormal capsulopupillary vessel during early fetal life at a stage of development "corresponding to a fetal length of 35 mm. or a fetal age of 8.5 weeks."

The theory that diverse causative agents are involved in the pathogenesis of mongolism[29] and that fetal anoxia may be an important pathogenic mechanism has not yet been proved. Several investigators, however, have reported the association between mongolism and maternal disease in early pregnancy.[29] In the most recent of these studies, Cummins, Talley and Platou[31] observed abnormalities of the intrauterine environment in the first trimester of pregnancy more than twice as frequently among the mothers of 126 mongoloid babies as among the mothers of 82 doubtful and nonmongoloid control groups.

The hypothesis that anoxia is an incitant to congenital malformations has been tested in the laboratory of the Department of Epidemiology, Harvard School of Public Health, by submitting pregnant mice to rarefied atmospheres at different stages of pregnancy.[32] Results to date indicate that anoxia produces intrauterine death and congenital defect in the mouse, with effects that vary with the degree of anoxia and stage of fetal development. Anencephaly, for example, was found to be a manifestation of anoxic insult on the eighth day, and cleft palate resulted from anoxia on the fourteenth day of pregnancy (Fig. 3). Doubtless, other agents will cause anencephaly, just as riboflavin deficiency produces cleft palate,[33] when acting at the critical stage of gestation.

GRADIENTS OF DEFORMITY AND STAGE SPECIFICITY OF DEFECTS

The manifestations of antenatal disease, like those of postnatal disease are expectedly variable so there is no reason to believe that there are as many different diseases as there are anomalies. Acquired malformations may be arranged as members of a connected series of stage-specific defects. For example, all gradations of twin monstrosities of a type (Fig. 4) that must be determined shortly after fertilization exist in unbroken sequence from incipient to nearly complete duplication, as shown in Figure 5.[35] Also dating from early pregnancy, all gradations of arrested differentiation exist between vestigial and cyclopean eye[37] and between the cyclopean eye and the duplicate eye (Fig. 6). Probably originating before the seventh week of fetal life[38] is the gradient characteristic of tracheoesophageal fistula (Fig. 7). Shortly thereafter is the period critical for mongolism[29, 30] when the middle phalanx of the fifth finger, for example, is differentiating. All degrees of arrested development of this structure are observed among mongoloid persons according to whether the bone is completely missing, merely dwarfed or normal (Fig. 8). No two mongoloid persons appear to duplicate precisely each other's vascular, bony and soft-tissue anomalies. They naturally have common cranial stigmas, for those were the arbitrary criteria for establishing the diagnosis. Anatomically, the striking characteristic of mongolism is its association with defects originating in the eighth week of fetal life. Epidemiologically, the striking characteristic is the associa-

FIGURE 5. *Biologic Gradient of Arrests between Single Individual and Identical Twins. (Source: Wilder[35] and Illustrated after Patten.[36])*

tion with manifestations of maternal systemic or uterine disease operating at about the same period.[39]

As development progresses the potential malformations of the embryo, fetus, infant and child become less and less dramatic. A short extremity resulting from poliomyelitis in childhood seems less grotesque than the withered arm that is the late manifestation of Erb's palsy, a traumatic birth injury. Erb's palsy, in turn, is hardly as freakish as the vestigial arm or the missing limb. Freakishness depends upon rarity and the subjective

FIGURE 6. *Biologic Gradient of Arrests between Vestigial Eye and Cyclopia and Between Cyclopia and Duplicate Eyes. (Source: Wilder[37] and Illustrated after Patten.[38])*

reaction of the beholder. Clinical importance is determined by the crippling effect. However, the stage of development at which a defect originates is of greater epidemiologic moment in the search for causation than the degree of deformity. The epidemiology of poliomyelitis is not a matter of degree of paralysis or whether one leg remains shorter

FIGURE 7. *Biologic Gradient between Different Types of Tracheoesophageal Fistula. (Adapted from Ingalls and Prindle[38] and Swenson.[39])*

than the other after infection. Concern is with any manifestation that serves to determine the presence of infection, and it is also necessary to know when the disease starts in individuals in order to trace its sweep through a population. The principle applies equally to agents causing congenital anomalies among the embryonic and fetal population.

RETROLENTAL FIBROPLASIA AS A STAGE-SPECIFIC DEFECT OF THE FETUS

The most striking characteristic of retrolental fibroplasia is its restriction in great part to prematurely born babies whose birth weights correspond with that of the fetus during the last trimester of pregnancy.[4, 40] Birth weight is an index of age and development that starts at the moment of fertilization, not at birth, and the markedly premature baby is no less a fetus simply because it is no longer contained by its mother. The physician caring for a premature infant developing retrolental fibro-

FIGURE 8. *Biologic Gradient between Different Types of Fifth-Finger Formation in Mongoloid Persons. (Adapted from Ingalls.[39])*

plasia possesses an opportunity, afforded to no one during gestation, of being able to watch an anomaly form in a fetus.

The following clinical and pathological facts have been established: the earliest detectable manifestation in postnatal life is congestion and tortuosity of the retinal vessels in the eye, which develops usually within a month or two of birth.[41] This is followed by progressive degrees of retinal edema, detachment and infolding, several months being required for migration across the retrolental space of fibroblastic elements from detached remnants of the retina. Anatomic variants or biologic gradients of the final ocular defect are known just as they are for other gross or localized somatic anomalies, such as those illustrated in Figures 5 to 8.[40, 42]

The following epidemiologic facts have been established: the mean developmental age at birth is equivalent to that of the 3.3-pound baby.[42] There is a significant association of prematurity with retrolental fibroplasia of the eye, hemangiomatous lesions of the skin[42] and with maldevelopments of the brain.[40] At some hospitals in Boston, Providence, Hartford, Denver and Chicago the ocular disease has been observed in approximately 20 per cent of markedly premature babies.[44] At other hospitals in some of these same cities, as well as in New Orleans[45] and Birmingham, England,[46] physicians report much lower prevalences.

Surely medicine is close to determining the causative agent or agents* when the susceptible host is restricted to a single age group, and the environment is so highly specific that hospitals in different cities report contrasting experiences with respect to incidence. The human infant does not change much from one city to another, but methods of handling obstetric disease and of delivering and caring for the baby do.

*There is no reason to believe that retrolental fibroplasia has a single causation.

Is the most significant causative factor a dietary deficiency or toxin as some investigators suggest?[46, 47] The question could be answered within a few months with appropriate planning. Hospitals with high prevalence of retrolental fibroplasia need only use the same formulas as hospitals with low incidences to test this hypothesis. Is prenatal, paranatal or neonatal anoxia an active agent?[48] The excellent statistical study of retrolental fibroplasia by Kinsey and Zacharias[44] showed that babies in whom retrolental fibroplasia developed stayed in oxygen for an average of twenty-one days, whereas those who did not develop the disease were maintained in oxygen for an average period of twelve days. If anoxia be postulated as a causative agent, comparisons of obstetric sedation and anesthesia as secondary factors contributing to anoxia are indicated both for hospitals experiencing much retrolental fibroplasia and for those encountering the disease rarely. For example, one of the hospitals reporting very low rates of retrolental fibroplasia has as its policy for delivering premature babies the avoidance of "anaesthetics and such sedatives as morphia, scopolamine and barbiturates . . . as they depress the already low vitality of the infant's respiratory center and cause asphyxia."[46] To compare this hospital's morbidity with that of another pursuing a more liberal policy regarding obstetric sedation and anesthesia is a relatively simple matter. To compare morbidity rates for different groups of babies within a given hospital is much more difficult. An intricate statistical problem involving multiple and partial correlations is presented when such variables as placental diseases and hemorrhages, systemic disorders, anemias and toxemias of pregnancy, multiple births, ante-partum sedation, obstetric anesthesia, type of presentation of the fetus and atelectasis may all be expected to play a part in producing anoxia.[43, 48]

None of the agents postulated to date as causative agents of retrolental fibroplasia affect the eye alone, and Krause[40] has rightly stressed the necessity of studying the disease as a general pathologic process. In the interests of public health, it is even more important to clarify the epidemiology of the condition. As with German measles, the solution of this problem is not in the hands of any single ophthalmologist, obstetrician, pediatrician, pathologist, embryologist, statistician or epidemiologist. The contributions of all are needed.

Cause and Prevention of Acquired Anomalies

As yet there is insufficient information upon which to base a broad program for prevention of acquired congenital malformations. More must be learned of specific agents that cause prematurity, stillbirths, monstrosities and anomalies. There is need for integrated research on the factors that determine stage-specific disease and for increased knowledge of fundamental distinctions between the acquired and the genetic defect.

Three infectious agents have established beyond all doubt their power to produce congenital defects: rubella, syphilis and toxoplasma. The importance of exanthematous, influenzal and other infections remains to be demonstrated, and vaccination during pregnancy has been shown to carry no appreciable risk for the baby.[49-51] A working hypothesis proposed by Ingalls and Gordon[52] is that metabolic as well as infectious agents that cause fetal death are generally capable of causing congenital anomalies when acting in sublethal degree at critical stages of development. This hypothesis is supported by data indicating that anesthetics,[53] dietary deficiencies,[53] intravenously administered colloidal dyes[54] and anoxia[52] produce recognizable deformities of the embryo and fetus in animal experiments.

Further studies are necessary to determine how acquired anomalies may be differentiated on clinical grounds from inherited malformations.[55] To clarify this important point, the error of assuming that an anomaly is inherited simply because it is present at birth should no longer be perpetuated. Since the inherited anomaly is related to chromosomal structure and the acquired anomaly is more closely dependent upon the pattern of organic development when it originated, the two types of disease are expectedly distinguishable in most cases. An overlapping of the two mechanisms is indicated by erythroblastosis, in which the genetic susceptibility is inherent in the fertilized embryo, whereas isoimmunization, hemolysis and erythropoiesis are acquired components of the total process.

Before 1940 the investigation of congenital malformations was done almost exclusively by laboratory and individual case study. The discovery that rubella is a teratogenic agent resulted in the application of the epidemiologic method to a specific phase of the over-all problem for the first time. This procedure of examining a selected population for its collective characteristics is as systematic as screening by physical examination for structural and functional defects. It does not supplant but supplements the other two methods of approach. Long neglected in the study of noncommunicable disease, epidemiologic research has demonstrated its value in such diverse fields as cancer, accidents and nutrition.[56-58] Today, it is indispensable to an accelerated understanding of the problem of congenital malformations or other noncommunicable disease. The particular challenge to epidemiology is not the attempted cure of acquired deformities by the skills of various specialists, but the determination of causative factors related to agent, host and environment that lead to their production and the development of a public-health program directed toward their curtailment and eradication.

Summary and Conclusions

Congenital malformations are second among the leading causes of death in infants under one year of age, being surpassed only by prematurity. The problems of premature birth, intrauterine asphyxia, stillbirths and congenital malformations are part of a common field of investigation.

Congenital malformations are now known to be either inherited or acquired during pregnancy as the result of maternal disease. Like other diseases, prenatal conditions may be explored through case study, group study (epidemiology) and experimentation. The particular role of the epidemiologic method is discussed.

Data indicating that post-rubella defects are stage-specific, determined not only by the virus but also by the stage of embryonic development at which maternal infection occurs, are presented.

Double, cyclopean and anencephalic monsters, as well as mongolism and tracheoesophageal fistula, are interpreted as members of a phylogenetic series of stage-specific defects, manifestations of disease acquired in utero at critical phases of development. Anoxia is postulated as an important cause of such maldevelopments.

Retrolental fibroplasia is interpreted as a stage-specific ocular defect of the prematurely born fetus. The problem, which is of epidemiologic as well as ophthalmologic, pediatric and obstetric concern, should be attacked simultaneously by co-operating groups of workers. It is as ripe for solution as congenital cataract was in 1940.

The facts indicate that acquired malformations are for the most part preventable. As yet, however, there is insufficient information upon which to base a program for the control of congenital anomalies. Further energetic exploration of the causes of prematurity, stillbirths, monstrosities and congenital anomalies is needed, with epidemiologic study especially warranted as a prerequisite to a program for prevention.

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THE TREATMENT OF SCABIES IN AN INSTITUTION: COMPARATIVE STUDY

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BOSTON

IN 1924, when the late Dr. Arthur M. Greenwood[1] called attention to the Danish polysulfide antiscabietic ointment, he introduced and popularized in this country the twenty-four-hour treatment for scabies. This was an advance over the previous three-day treatment with the customary sulfur preparations. The next advance in treatment came with the introduction of benzyl benzoate, and this achieved such extensive use that it became official in the *United States Pharmacopoeia* (thirteenth revision, April 1, 1947). With the reintroduction of DDT during World War II, another phase of insecticide study was initiated — namely, the co-ordination between insect toxicants in general use and their application to medical therapeutics.

Goldman[2] has called attention to the therapeutic implications in the new chemicals devised for insect control. Among these so-called newer compounds are two that have already established themselves as effective antiscabietics: the gamma isomer of hexachlorocyclohexane, available as a proprietary cream under the name Kwell, and N-ethyl-o-crotonotoluide, available as a proprietary cream under the name Eurax. Both preparations have already been quite extensively tested clinically, among others by Cannon and McRae,[3] Couperus[4] and Tronstein.[5]

A most unusual opportunity presented itself for a collated clinical study of these preparations. It is well known to medical personnel associated with public mental institutions that scabies is endemic there in varying degrees, obviously because of the extensive direct contact between the patients, especially in large, crowded wards, and the difficulties inherent in maintaining adequate and frequent body and clothing hygiene. The picture is further complicated in institutions where patients are permitted to make visits to their homes. A very few patients returning with scabietic infestations from home visits can become an adequate source of an appreciable endemic.

In one of the large state mental institutions, there is a small colony, separated from the main buildings by a considerable distance and housing a fairly uniform population. These patients are almost all elderly white women who are nonviolent. The colony is divided into three large wards with subdivisions, which I shall designate as wards A1, A2, B1, B2, C1, C2 and C3. The numbers of patients are, respectively, 50, 49, 45, 42, 40, 45 and 57. Ward A has 99, Ward B 87 and Ward C 142 patients each; the total number is 328. Although there is a free movement among the patients within the subdivisions, and somewhat less free traffic between the subdivisions of each large ward, there is none between the large wards themselves except during mealtimes, in the large dining room used in common by all the patients. Even here, their contacts are so brief as to be practically disregarded for the evaluation of this study, because the patients in the wards take their meals in succession and not all together.

For a long time sporadic cases of scabies, scattered throughout the entire colony, appeared. During the past year, the incidence became slowly higher, and in November, 1949, a survey showed such a high percentage of patients affected that it was decided to treat the colony *en masse*. Because of an appreciable incidence of post-therapeutic dermatitis ordinarily expected to follow the use of Danish ointment, this method was rejected. The obvious opportunity of employing more than one remedy as a comparison study was embraced, and it was decided to use benzyl benzoate emulsion for Ward A, Eurax for Ward B and Kwell for Ward C.

All the patients were thoroughly examined for evidence of scabies. Some patients, although they showed generalized, excoriated eruptions, could not unequivocally be diagnosed because of a long-standing condition of dermatitis factitia, the lesions being almost entirely self-inflicted as a result of their psychosis. In the patients with a clear-cut scabietic infection, the eruption was classic both in morphology of lesions and in sites of distribu-

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tion. The incidence of infection with scabies by wards is given in Table 1.

Treatment System

All patients were treated exactly alike; every patient in the colony was treated, whether or not affected. Each ward was treated completely as a unit. After therapy had been completed in one ward, the next one was treated in the following week, and the next one a week later. The same team of nurses and attendants gave all the treatments under the same supervision. Each person on the treatment team was assigned to only one procedure, which was carried out as a production-line operation, throughout the entire three-week project.

First Day

Bath. In the morning, right after breakfast, a specially organized shower was given. Each patient was checked in alphabetically, undressed, soaped, showered and dried (by attendants and nurses in bathing suits actually in the shower room with the patients).

Medication. The patient stood on a sheet on the floor, two nurses applying the medication, liberally, by vigorous manual application to the entire body surface from the neck down, including the wrists and hands, genitals, perineum, ankles, feet and soles. The name was called off and checked after the application had been completed.

Clothing. The patient was dressed in the usual clothing, her name was checked *out* alphabetically, and she was sent back to the ward through a one-way traffic system to prevent evasion of treatment.

Second Day

Medication. In the morning, right after breakfast, using the alphabetical check-*in* and check-*out* system, each patient undressed; medication was again applied liberally by vigorous manual application to the entire surface area below the neck, and then the patient was dressed in the same clothing and sent back to the ward.

Third Day

Bath. In the morning, right after breakfast, the organized shower was repeated. The patient was alphabetically checked in, soaped, showered and dried exactly as on the first day.

Clothing. The patient was dressed in a completely different outfit of clothing previously sterilized by autoclaving or disinfection or special sterilizing laundering, depending on the article of clothing. The clothing worn by the patient on the way *in* was red-tagged for processing before reissue for wearing again.

Ward procedure. Patients were alphabetically checked *out* into the recreation lounge and not permitted back into the ward. In the morning, while they were at breakfast, every bed was stripped of all linen, which was red-tagged and sent to the laundry. Then all the mattresses and pillows were sprayed with a fine mist from a pressure-pump spray with 2 per cent benzyl benzoate soapy emulsion, on Ward A and Ward B; Ward C was sprayed with an emulsion of gamma hexachlorohexane. A general, rapid housekeeping cleaning of the entire ward, including a wash of the chairs with 3 per cent benzyl benzoate soapy emulsion, was then given. In the afternoon, the beds were made up with fresh linen. In the evening, the patients returned to the clean ward.

Table 1. *Summary of Antiscabietic Treatment of 328 Patients.*

Ward	Treatment	Total No. of Patients	No. with Lesions	Patients with Lesions Still Present After 7 Days	Patients with Lesions Still Present After 4 Wk.	Patients Retreated
A 1	Benzyl benzoate	50	22	13	2	1 (twice)
A 2	Benzyl benzoate	49	22	16	5	3
Totals		99	44	29	7	4
B 1	Eurax	45	23	16	9*	5 (1 twice)
B 2	Eurax	42	10†	5	4	2 (1 thrice)
Totals		87	33	21	13	7
C 1	Kwell	40	17	3	1‡	0
C 2	Kwell	45	10	1	0	0
C 3	Kwell	57	0	0	0	0
Totals		142	27	4	1	0

*The lesions present in 4 of these patients after first treatment were from psychotic self-infliction and were not scabietic.
†One patient whose skin was clear at onset of study, developed scabies after a home visit and required 3 retreatments.
‡This patient was clear of scabietic lesions at end of 6 weeks without retreatment.

Discussion

The procedure described above was devised to fit the situation present at this particular institution or similar institutions. Certain aspects of this routine would not be applicable to the treatment of scabies in the usual course of general practice.

For example, it is ordinarily not necessary to give the mattresses special treatment because the bed linen is interposed between the patient and the mattress and sterilization of the linen is usually adequate. In this specific situation, however, particularly because of the tendency of these patients to disarray their beds, it was considered advisable to treat the mattresses as indicated. Another procedure instituted in this particular instance, which ordinarily is unnecessary, is the *pretreatment bath*. In the usual routine use of any of these three medications, the pretreatment bath is not necessary.

The largest ward subdivision, C3, had no patients with objective signs of scabies. Although to treat 57 patients with a procedure, that, apparently unnecessarily, takes so much time and energy might seem questionable, it was nevertheless decided to do so because the other two ward subdivisions had a high incidence of infection. There was also the possibility that some of these patients, although without discernible lesions, had been infected; their symptomatic, subjective history could not be relied on. This condition must be considered applicable to the entire situation and thus imposes an unmeasurable quantity on the final evaluation. All decisions and opinions were thus necessarily based solely on objective findings.

A noteworthy observation was the complete absence of post-therapeutic dermatitis, at least to any appreciable degree. This is unequivocally so with both Eurax and Kwell. Several transient mild irritations followed the benzyl benzoate, also being experienced to a moderate degree with this remedy over the past two or three years in its occasional and discontinuous use throughout this hospital generally.

No patients who were clear of suspicious lesions gave evidence of infection after the treatment. The exception was a patient on Ward B2 who was clear at the beginning of the study, went home on a visit, and then manifested a most resistant, profuse, typical infection, which required a first treatment with Eurax and three retreatments with Kwell. No patients first treated with Kwell needed retreatments. Of the patients first treated with benzyl benzoate, 3 needed one retreatment, and 1 needed two retreatments. Of the patients first treated with Eurax, 5 needed one retreatment, 1 needed two retreatments, and 1 (described above) needed three retreatments.

Retreatments were to have been done with the same medication as the first treatment. Because of a misunderstanding, however, all retreatments were done with Kwell. It was necessary to use Kwell *twice* after Benzyl Benzoate in 1 case, *twice* after Eurax in 1 case and *three times* after Eurax in another case to achieve clinical cure. Apparently, the cases resistant to one remedy are also resistant to another.

Since this paper was submitted, another favorable report on the treatment of scabies with Kwell ointment has appeared.[6]

Summary

Scabies, endemic in a colony of three separate wards of a state mental institution, was treated with benzyl benzoate, gamma isomer of hexachlorocyclohexane (Kwell) and N-ethyl-o-crotonotoluide (Eurax). A total of 328 patients were treated; not all had signs of scabies, but all were treated and all were clinically free of signs at the end of the study.

Ninety-nine patients were treated with benzyl benzoate; 44 of these had lesions, and 4 required retreatment. Eighty-seven patients were treated with Eurax; 33 of these had lesions, and 7 required retreatment. One hundred and forty-two patients were treated with Kwell; 27 of these had lesions and none required retreatment. It is not practicable to express these results in terms of percentages because of the peculiar conditions resulting from the psychiatric status of the patients. No untoward results from the treatments were observed. The newer antiscabietics are superior to the old sulfur preparations.

I am indebted to Mr. P. B. Marsden, manager of Commercial Solvents Corporation Pharmaceuticals, for the supply of Kwell and to Albert Hemming, M.D., of Geigy Company, Incorporated, for the supply of Eurax.

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AUREOMYCIN*

In Vivo and in Vitro Observations in a Clinical Laboratory

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THE development of bacterial resistance to aureomycin appears to be less common than that to penicillin and streptomycin. The literature on aureomycin, now well over 500 articles, contains few reports of the development of resistance. In vitro increases in resistance have been reported with *Aerobacter aerogenes* and *Klebsiella pneumoniae*,[1] Group A and Group C streptococci,[2] alpha-hemolytic streptococci[3] and *Staphylococcus aureus*.[4] Reports of in vivo increases in resistance are even fewer, having been reported with *Streptococcus faecalis*,[3] *Escherichia coli*[6] and *Staph. aureus*.[5, 7, 8] The purpose of this report is to record the recovery of strains of *Staph. aureus* that exhibited increasing aureomycin¶ resistance during therapy. The relatively uniform in vitro sensitivity of *Staph. aureus* to small doses of aureomycin has been mentioned in previous reports from this laboratory[9] and elsewhere.[4]

In vitro sensitivity to aureomycin was determined by a tube-titration method similar to that used for penicillin.[9, 10] The method, composition of the medium (tryptic digest broth) and incubation period (sixteen hours) were constant throughout the study. The first tube showing complete inhibition of growth was taken as the minimal inhibiting dose. Duplicate titrations invariably checked within one tube.

Sensitivity determinations made in this manner were obtained on the successive strains of *Staph. aureus* isolated from the nasopharynx of 21 patients with mucoviscidosis (pancreatic fibrosis)|| at various intervals during aureomycin therapy.[9] The strains from 21 such patients were studied, and in 8 cases strains of increasing resistance were isolated. The schedule of aureomycin therapy was the same in the entire group. It is interesting that *Staph. aureus* frequently persisted in the nasopharynx during therapy although the patients continued to improve clinically. In addition, the successive strains isolated from the sinus tract of a patient with chronic osteomyelitis and those isolated from the skin lesions of an infant with infected eczema showed a similar increase in resistance. Preliminary data on 9 of these strains are summarized in Figure 1, in which eightfold to thirty-two-fold increases in resistance are recorded after eleven to sixty-one days of therapy.

Since most of the data presented in Figure 1 had been obtained on single-colony fishings, the study was continued on 7 patients (Table 1) from whose

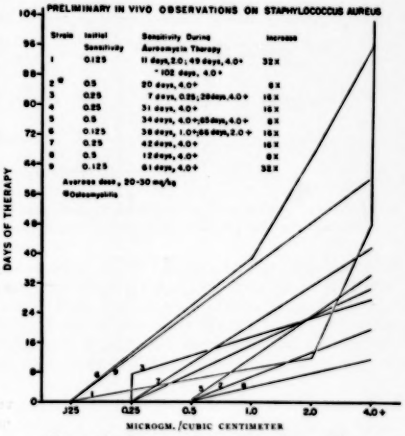

FIGURE 1. *Increased Resistance to Aureomycin.*

cultures 10 single-colony fishings of *Staph. aureus* were examined for aureomycin sensitivity at various intervals during therapy. The sensitivity determinations on the multiple fishings from a given culture were done on the same day.

As may be seen in Table 1, all the colonies studied from 3 (Cases 1, 2 and 6) and the majority of those from the fourth patient (Case 8) exhibited increased resistance as compared with that of the original isolate. Assuming that a difference of one tube in the end point of a titration is of no significance, these strains exhibited an eightfold to sixty-fourfold increase in resistance to aureomycin in vivo. The strain isolated from Case W on the sixth day of therapy showed the most striking increase in resistance. It is of interest that two single-colony

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¶A generous supply of aureomycin for use in this study was furnished by the Lederle Laboratories, Pearl River, New York.

||Dr. P. R. Patterson assisted in the care of some of these patients.

fishings from Strain 8 (Table 1) seemingly reverted to greater sensitivity although the remaining isolates from this strain increased in aureomycin resistance. In other patients (Case 5 and 7, Table 1) an apparent increase in resistance early in therapy later disappeared.

Exposure to aureomycin on a cup plate induces pleomorphic changes in some strains of *Staph. aureus* similar to those following exposure to small doses of penicillin.[11] When the zone of inhibition surrounding a cup is examined by colony-staining technics in situ[12] large, swollen cocci about the size of yeast cells are seen lying against a background of partially lysed cells. Dense, "heaped-up," intensely staining microscopic colonies of minute cells are scattered throughout the zone of inhibition. The edges of such colonies are ragged, with groups of protruding cocci, some of which appear to be growing beneath the surface of the agar. The over-all morphology of these colonies is suggestive of the "L" form, which has been described as occurring in cultures of bacillary cells.[13] Further observations on these morphologic changes are now in progress.

TABLE 1. *In Vivo Aureomycin Resistance of Successive Strains of* Staph. aureus *Isolated during Therapy.*

Case No.	Sensitivity of Original Strain microgm./cc.	Days of Therapy*	Sensitivity of Later Colonies† microgm./cc.	Increase in Resistance
1	0.125	11	2.0	64 fold
		27	0.5	
		49	4.0+	
		71	4.0+	
		102	4.0+	
		131	4.0+	
		158	4.0(5)	
			8.0(5)	
		197	2.0(1)	
			4.0(6)	
			8.0(2)	
			16.0(1)	
2	0.5	4	0.5	32 fold
		11	0.25	
		20	8.0(10)	
		26	8.0(2)‡	
		40	2.0(1)	
			16.0(7)	
			32.0(2)	
6	0.125	38	1.0	32 fold
		66	2.0	
		102	2.0(1)	
			4.0(8)	
			8.0(1)	
8	0.5	12	4.0+	8 fold
		45	4.0+	
		54	0.0625(2)	
			2.0(7)	
			4.0(1)	
		87	2.0(1)	
			4.0(2)	
			8.0(7)	
W	?	2	0.5	64 fold
		6	62.0(9)	
5	0.5	34	4.0+	—
		65	4.0+	
		83	2.0(6)	
			4.0(3)	
			8.0(1)	
		121	0.125(1)	
			0.25(6)	
			0.5(3)	
7	0.25	42	4.0+	—
		101	0.25(1)	
			1.0(2)	
			2.0(2)	
			4.0(2)	
			8.0(2)	
			32.0(1)	
		155	0.25(6)	
			0.5(2)	
			1.0(1)	

*Average dose, 20-30 mg. per kilogram of body weight.

†Figures in parentheses represent the number of single-colony fishings studied.

‡Only 2 colonies on original blood-agar plates.

Discussion

Antibiotic resistance may be developed in a bacterial culture by either (or both) of two mechanisms: survival and proliferation (selection) of the few relatively resistant cells present in any bacterial population after exposure to antibiotic, and genetic mutation. Studies reported by Demerec[14] indicated that penicillin resistance increases stepwise and is partially dependent on selection, whereas streptomycin resistance results from several simultaneous mutations of equal potency, resistance appearing as a random distribution. Preliminary experiments with aureomycin also reported by Demerec[15] suggest that the pattern of the development of resistance to aureomycin differs from that of streptomycin in that highly resistant mutants do not appear at random. The data are as yet incomplete but the pattern of development of aureomycin resistance may resemble that of penicillin.

Although such a development is probable, it cannot be concluded with certainty that the successive strains of *Staph. aureus* isolated from the nasopharynx during aureomycin therapy actually were derived from the same parent strain. It is even more probable that the strains isolated from Case 2 (chronic osteomyelitis) and Case W (infected eczema) were derived from the same parent strain.

The data presented on 4 cases (Cases 1, 2, 6 and 8) in the present study in general suggest an orderly appearance of increasing resistance with prolonged in vivo exposure to aureomycin. The rapid increase in resistance observed in Case W may have been the result of selection rather than mutation. It is interesting that concurrently this strain showed a sixteen-thousand-five-hundred-fold increase in resistance to penicillin (probably by selection), from 0.03 to 500 Oxford units per cubic centimeter during two and a half days of penicillin therapy.

Although the successive strains isolated from these patients show a greater increase in aureomycin resistance than has been observed with *Staph. aureus* in vitro, the magnitude of increase is much less than that of the increases observed with penicillin or streptomycin. The appearance in vivo of increased tolerance in these strains did not alter the clinical effectiveness of aureomycin in these patients, with one possible exception (Case W), which terminated fatally.

Summary

The successive strains of *Staphylococcus aureus* isolated from the nasopharyngeal cultures of 8

patients with mucoviscidosis (pancreatic fibrosis), 1 case of chronic osteomyelitis and 1 case of infected eczema exhibited eightfold to sixty-four-fold increases in resistance during aureomycin therapy.

The strains from 7 cases were studied in more detail by means of successive multiple single-colony fishings. The data derived from 4 of these cases suggest a gradual, orderly appearance of increasing resistance with prolonged in vivo exposure to aureomycin. The strains isolated from the lesions of a patient with infected eczema, on the other hand, showed a rapid increase in aureomycin resistance. The same strain exhibited a concurrent increase in penicillin resistance.

The increased resistance observed in successive cultures was of relatively low order and with one possible exception did not alter the clinical effectiveness of aureomycin therapy.

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ECTOPIC PREGNANCY IN A PATIENT WITH THREE FALLOPIAN TUBES*

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THE presence of ectopic pregnancy in a supernumerary fallopian tube is sufficiently unusual to warrant the report of a case. Novak[1] states that "duplication in the form of a third tube is very rare." The more common anomalies of the tubes consist of double fimbriated extremities or diverticula occurring in the course of an otherwise normal tube.[2] Ectopic pregnancies have been reported in such outpocketings and in the extra fimbriated end of the tube. Nuñez[3] described a twenty-three-year-old woman with rupture during ectopic pregnancy occurring in the right fallopian tube, which, on microscopical examination, was divided throughout its length by a membrane that made it double. Steckbauer[4] reported a similar case occurring in an anomalous left fallopian tube arising from the left side of the pelvis. The uterus and right adnexa were normal. There were no left adnexa connected with the uterus and no left round ligament. A normal left ovary was found attached to the pelvic wall. No connection was found between the anomalous left tube and the vagina. Kearns[5] presented a case of fatal rupture of the uterus in a thirty-eight-year-old woman in the seventh month of pregnancy. At autopsy, two rudimentary tubes were found, presenting nonpatent fimbriated ends, and the isthmic portion of each tube ended in a solid, cord-like tissue. An accessory tube arose from the fundus and admitted a probe into the uterine cavity. Three previous full-term pregnancies had evidently been due to the fact that the impregnated ovum had entered the uterus via this tube.

A careful search of the literature has failed to show a case of ectopic pregnancy in a third tube arising from the uterine cornu and extending independently of the other adnexa for a normal distance to terminate in a fimbriated end, in a patient with two normal Fallopian tubes and ovaries.

Case Report

Mrs. M. A. M. (M. A. H. 70608), a 27-year-old housewife, entered the hospital early in the morning of February 11, 1949, complaining that on this morning, when she started to get up out of bed, she had been seized with a sharp pain across the lower abdomen so that she could not straighten up. She had to return to bed at once. The pain persisted, and she found it painful to turn in bed. About 2 weeks previously she had had a similar attack, lasting 6 hours. This then left her and she had had no recurrence until the present episode. There had been no nausea or vomiting with either attack. The last regular menstrual period had begun on January 15 and had been entirely normal, and there had been no leukorrhea. The menses had begun at 12 years of age, and periods had subsequently occurred every 30 days, lasting for 5 days and causing no pain. The bowels were regular. There were no urinary symptoms.

Tonsillectomy and adenoidectomy had been performed in childhood. From the time of the menarche, the patient had suffered from dysmenorrhea, which resisted medical treatment. In December, 1940, pelvic examination under general anesthesia showed the cervix to be normal; the uterus was slightly anteflexed, normal in size and freely movable. No pelvic masses were palpable. A slow, thorough dilatation of the cervical canal was done, followed by curettage. Microscopical study of the curettings‡ showed "polypoid endometrium in late premenstrual or early menstrual

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phase, with no evidence of malignant degeneration." The dysmenorrhea was entirely relieved by the operation. The patient had had two normal pregnancies with living, full-term babies, one in December, 1946, and one in June, 1948.

The patient's father and mother were living and well. She had no siblings. The family history was negative for tuberculosis and cancer.

Physical examination was negative except that the abdomen revealed very marked tenderness in the mid-line below the umbilicus. Vaginal examination disclosed no flowing. The cervix was slightly softened. Upward pressure on the cervix caused acute pain in the lower abdomen. No mass was palpable. Rectal examination demonstrated no polyp or carcinoma.

The temperature was 97°F., the pulse 80, and the respirations 20. The blood pressure was 105/70.

Examination of the blood showed a red-cell count of 4,490,000, with a hemoglobin of 15.4 gm. (91 per cent), and

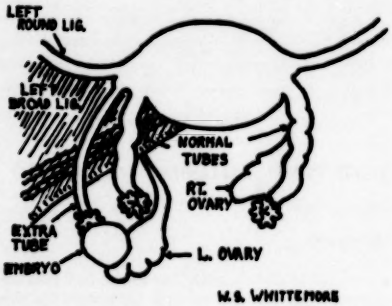

FIGURE 1. *Appearance of Supernumerary Tube, with Embryo Attached to the Fimbriated End.*

a white-cell count of 11,200, with 79 per cent neutrophils, 18 per cent lymphocytes, 2 per cent monocytes and 1 per cent basophils. The urine had a specific gravity of 1.032 and gave an acid reaction with negative tests for albumin and sugar. The sediment contained amorphous urates. The blood Hinton test was negative. The prothrombin time was 23 seconds.

The diagnosis of ectopic pregnancy with some bleeding into the abdominal cavity was made, and the patient was hospitalized and prepared for immediate operation.

On February 11, under spinal anesthesia with the patient in the Trendelenburg position, a low median incision was performed. The peritoneum was opened without incident. The true pelvis was filled with fresh blood. The uterus and the right and left tubes and ovaries were normal, but arising from the left cornu of the uterus, just inferior to the normal left tube, was a separate, third fallopian tube with a cord-like stricture but a normal fimbriated extremity. It had its own blood supply and was separated from the broad ligament by a short peritoneal ligament arising from the broad ligament in such a manner that this third tube ran parallel to the left tube but was at no point connected with it. Attached to the fimbriated end of the supernumerary tube was a small embryo, which had started to erode the left ovary and from which the hemorrhage had occurred (Fig. 1).

The supernumerary left tube was excised together with the attached embryo, but this in no way endangered the circulation of the normal left tube, which maintained a normal color throughout the operation. The bleeding, eroded area of the ovary was closed with No. 00 chromic-catgut sutures. The blood clots were removed from the pelvis. The abdominal wall was closed in layers.

The patient was returned to bed in good condition and given a transfusion of 500 cc. of compatible blood.

Pathological examination* was reported as follows:

The specimen comprises two small pieces of tissue. The first is elongated and somewhat tubular, with a funnel-shaped opening toward one end. This specimen measures 4.5 cm. in length, and varies from 1.0 to 2.2 cm. in diameter. The funnel-shaped end becomes continuous with a small, oval, cyst-like mass, 1.5 cm. in diameter. Section across the cyst reveals an accumulation of blood clot, bordered by a thin, friable, gray, membranous wall. Multiple sections across the narrow, tubular portion of the specimen disclose a number of blood vessels, but there is no demonstrable lumen. The second specimen is somewhat irregular and measures 1 by 0.7 by 0.4 cm. This is soft, gray and, on section, finely cystic.

Microscopical examination shows an early ectopic pregnancy, composed of viable, primitive and somewhat edematous chorionic villi, embedded in blood clot. This makes up the hemorrhagic sac described above. Sections through the outer end of the tubular specimen reveal the fimbriated end of a tube with diverticula within the walls. This fimbriated end shows a moderate decidual reaction with implantation of villi into the wall, and digestion and rupture of the wall, with hemorrhage. The histology of this area shows the usual epithelial lining of a tube, the typical villiform pattern of the endosalpinx and the bordering smooth muscle and serosa. There is a mild, organizing, inflammatory reaction over the serosa. Sections taken through the proximal half of this specimen reveal an imperforate tubular mass, composed of tortuous blood vessels embedded in myxomatous connective tissue and bundles of smooth-muscle fibers. The second specimen is made up of a little paraovarian tissue including several minute paraovarian tubules.

The over-all picture is one of an early ectopic tubal pregnancy, with implantation within the wall in the region of the fimbria of the tube, lysis of the wall, with rupture and hemorrhage. This ectopic pregnancy appears to have become implanted in the fimbriated end of an anomalous and imperforate accessory salpinx. The fimbriated end of this anomalous tube presents all the characteristics of a normal salpinx. The proximal two thirds is made up of blood vessels, myxomatous connective tissue and smooth muscle, with no sign of an endosalpingeal lumen and with no evidence of pre-existing inflammatory reaction.

The patient made an uneventful recovery. She was out of bed on the 3rd postoperative day and was discharged from the hospital at the end of 9 days. Catamenia returned in March about 1 week late.

SUMMARY

A case of ectopic pregnancy in a patient with three fallopian tubes is reported. A careful search of the literature fails to disclose a similar case.

The remarkable feature in this case is that the patient was left with two normal tubes and ovaries after excision of an independent, anomalous third fallopian tube upon the fimbriated extremity of which the impregnated ovum attached itself. That the ovum became fertilized while free in the abdominal cavity is the only possible explanation of this unusual case.

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*Performed by Dr. H. Edward MacMahon, professor of pathology, Tufts College Medical School.

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MEDICAL PROGRESS

DIABETES MELLITUS

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BOSTON

IN THIS progress report on diabetes mellitus, covering the years 1948 and 1949, the following subjects are considered: insulin chemistry; biochemistry and physiology; hyperglycemic factor; experimental diabetes and endocrine interrelations; diagnosis; psychiatric aspects of therapy; insulin therapy; insulin allergy; miscellaneous complications; intercapillary glomerulosclerosis; retinitis; surgery; pregnancy; and diabetic acidosis.

INSULIN CHEMISTRY

The chemical nature of insulin has been analyzed by various technics.[1, 2] It appears to be a protein of a molecular weight (m.w.) of 48,000 at pH 7.0 and dissociates into four equal portions in acid solution. The latter can be further split by the enzymatic action of chymotrypsin into ten peptides of 800 m.w. each and a large protein "core" of 4000 m.w., with complete loss of activity at this stage. Further enzyme action splits these components completely into various amino acids, the core furnishing 80 per cent of the cystine. Chemists are still a long way from the isolation of a simple yet active component of the insulin molecule.

BIOCHEMISTRY AND PHYSIOLOGY

The biochemistry of carbohydrate metabolism has been concisely summarized by Stetten.[3] He emphasized the fact that the metabolic pathways of carbohydrate, protein and fat cross one another at many points, forming a huge metabolic pool of chemical equilibriums. Of great interest was the outline of the fate of 30 gm. of glucose administered to the normal rat: only 1 gm. is stored as glycogen, 10 as fat and 19 degraded into the metabolic pool for energy and conversion to protein, fat or other purposes. Other studies with radioactive carbon have demonstrated that the liver is the site of the conversion of glucose to long-chain fatty acids[4] and that in diabetic rats the same fatty acids are readily converted back to glucose.[5] Previously, only the short-chain fatty acids had been known to be involved in such reactions.

It is of great interest that insulin has been shown to exert its action at more than one site. Cori had previously demonstrated the participation of insulin in the hexokinase reaction by which glucose is converted to glucose-6-phosphate, and thus introduced into the metabolic pool. Recent work has revealed that insulin also participates in various reactions in the tricarboxylic cycle, at sites far removed from the above. The first reaction is the specific synthesis of phosphocreatine unrelated to oxidative processes, in both brain and heart-muscle preparations of the rat.[6] The second is the metabolism of pyruvate to carbon dioxide in the isolated diaphragm muscle of the rat.[7] Both reactions are decreased in alloxan diabetes and restored to normal by the in vitro addition of insulin. Finally, using in vitro preparations of liver slices, Bloch and Kramer[8] were able to accelerate the conversion of acetate to fatty acids by the addition of pyruvate together with insulin.

The old controversy concerning the metabolic defect in diabetes seems on the way to settlement by compromise: it appears to be a combination of both overproduction and underutilization of glucose.

Studies of glucose uptake in the isolated rat diaphragm have revealed interesting details of the key roles of insulin and the hexokinase reaction in the underutilization of glucose by diabetic tissue.[9] It is concluded that of all the possible hexokinase activity present, only 25 per cent is realized in the diabetic subject, and only 50 per cent is present even in normal persons. This activity may be raised to 75 per cent by removal of the pituitary body and to 100 per cent by the further addition of insulin. Insulin added to muscle in vitro has been shown to combine with it within ten seconds and caused a ninety-fold increase in glucose uptake.[10] Thus, in muscle both pituitary and unknown inhibitors of hexokinase are normally present, interfering with glucose utilization. The addition of insulin fully corrects such interference.

On the side of overproduction, interesting new data have been revealed in human beings by the use of the cardiac catheter in the study of hepatic venous blood.[11, 12] In a normal person weighing 70 kg. the average liver glucose output in the fasting state is 13 gm. per hour, and after intravenous administration of sugar this output was found to cease only above a blood sugar level of 175 mg. per 100 cc. Comparative studies showed a greater arteriovenous difference and therefore utilization in peripheral than hepatic blood at elevated levels. The finding of a continued output of liver sugar at elevated blood sugar levels in human subjects is at variance with previous animal studies. The hepatic glucose output takes care of 70 per cent of the normal metabolic requirement and only 7

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per cent of this output (by calculation from hepatic urea output) is derived from protein sources. In diabetic ketosis the total glucose output was doubled and the proportion derived from protein was tripled. In ketosis insulin diminished both glucose output and urea excretion, and with equal rapidity.

This close interrelation between glucose and protein metabolism has been illustrated in the past by the increased urinary nitrogen and blood amino acids in human beings with diabetes. Recently, Mackler and Guest,[13] by analysis of amino acid excretion in poorly controlled alloxan diabetes in rats, showed that this increased catabolism is simply a quantitative increase of normal protein breakdown. Moreover, Lotspeich[14] demonstrated that insulin administration, even in normal dogs, causes a decrease in the various blood amino acids in a pattern corresponding to that of the amino acid content of the muscle protein — a positive indication of protein anabolism. Insulin hypoglycemia accelerates protein breakdown.[15] Thus, lack of homeostasis in either direction in carbohydrate metabolism is associated with disturbances, not merely in fat and ketone metabolism but also in protein metabolism. This finding may be relevant to the advisability of normoglycemia for the prevention of the various tissue complications occurring in diabetes.

Somogyi[16] showed that arteriovenous blood sugar differences could be used as an index of peripheral utilization of glucose, but emphasized the need for accurate blood sugar technics in such studies. He demonstrated that the peripheral utilization played a large part in blood sugar regulation, rising sharply on elevation of blood sugar and falling abruptly when the arterial blood sugar fell to fasting levels.[17, 18] The arteriovenous difference never became negative. His results demonstrated the great efficiency of even small doses of insulin in increasing the peripheral utilization of sugar at normal levels.[19] He believed that the abrupt cessation of peripheral utilization during hypoglycemia was due to insulin antagonists originating largely in the adrenal cortex. With the use of adrenal cholesterol[20] and the actual blood glycogenic corticosteroid levels[21] as indexes of adrenocortical activity it has since been confirmed that hyperglycemia has an inhibiting and hypoglycemia a stimulating effect on this activity.

There is now further important information about pancreatic islet physiology. Using the isolated perfused rat pancreas, Anderson and Long[22] showed that hyperglycemia for an hour caused increased secretion of insulin. Foà[23, 24] by a cross-circulation technic in dogs, discovered that in the course of a glucose tolerance test the outpouring of insulin into the pancreatic vein started in fifteen to thirty minutes and reached its peak in sixty to ninety minutes. This demonstrates the dynamic participation of pancreatic insulin in the regulation of blood sugar.

Mirsky[25] recently reported an insulin inactivating enzyme system (insulinase) in many tissues throughout the body, in greatest concentration in the liver, kidney and muscle. Weisberg et al.[26] confirmed this indirectly by showing in depancreatized dogs that insulin is less effective when administered by way of the portal vein and liver than by the femoral vein. By this method, they estimated the rate of destruction of insulin in the dog to be 1/25 to 1/50 unit per kilogram of body weight per hour. DeDuve[27] showed by measurement of peripheral utilization of glucose after hepatectomy in the dog that this inactivation of insulin applied to endogenous as well as to exogenous insulin. Mirsky[28] demonstrated that fasting diminished the liver insulinase and refeeding reconstituted it and finally that the injection of certain rat-liver extracts into normal rabbits increased their sensitivity to injected insulin.[29] These studies of the fate of insulin in the body may lead the way to an understanding of insulin resistance.

Hyperglycemic Factor

Insulin has been known to produce a mild hyperglycemic effect in the first few minutes after intravenous (but not subcutaneous) administration.[30] This action has been traced to another protein present to the extent of 5 to 10 per cent in insulin as prepared commercially in the United States. It is not present in Danish Novo insulin, the production of which is slightly different from that of the American preparations. Its presence in the pancreas of severe alloxan-diabetic animals (with few remaining beta cells) indicates its probable origin in the alpha cells.[31] By way of confirmation, it has also been demonstrated by cross-circulation experiments in pancreatic venous blood of both normal and alloxan diabetic dogs.[32] This factor acts, not by antagonizing insulin, but by causing glycogenolysis in the liver.[33] Whether it has a physiologic function is at present unknown, but it has been suggested that Von Gierke's disease might represent a deficiency of this factor.

Experimental Diabetes and Endocrine Interrelations

A comprehensive review of this subject has recently been presented by Haist.[34] It had already been noted that ascorbic acid given one minute before alloxan enhances its effect. It has been further shown that a reduction product, dehydroascorbic acid, when injected intravenously, caused hyperglycemia and in larger doses, a triphasic blood glucose response such as is seen after alloxan.[35] This is of particular interest since of all the known naturally occurring compounds dehydroascorbic acid has a structure that most nearly approaches that of alloxan.

In the rat a dose of 3 gm. of glucose per kilogram of body weight intravenously produced beta-cell

degranulation within fifteen minutes, and repeated injections resulted in a temporary diabetic state lasting eight days.[36] Persistent hyperglycemia and beta-cell degranulation have been produced by three to seven days of intravenous glucose administration in the dog.[37] Finally, Dohan and Lukens[38] have been able to induce a persistent diabetes in the cat simply as a result of prolonged hyperglycemia. This occurred both in normal and in partially depancreatized animals after fourteen to one hundred days of such treatment, and the beta cells showed only hydropic degeneration. The occurrence of this phenomenon in three different species lends support to those who deplore the presence of hyperglycemia in the treatment of patients with human diabetes.

It has been observed that 25 per cent of diabetic patients show no cytologic changes in the pancreas by present methods. This has sometimes been offered as evidence for the presence of an extrapancreatic mechanism for some cases of diabetes. However, it has recently been observed that rats, after small enough doses of alloxan, may show diabetic glucose tolerance tests even in the absence of degranulation or other pathologic changes in the beta cells.[39]

Temporary diabetes has been produced in man by stimulation of the adrenal cortex with large doses of pituitary adrenocorticotrophic hormone (ACTH).[40] This is accompanied by elevated fasting blood sugar levels, abnormal glucose tolerance tests, increased urinary nitrogen and uric acid, and decreased blood glutathione levels. The last seems to be a necessary element, for intravenous administration of glutathione decreases the blood sugar level during the course of ACTH treatment[41] or in the diabetes of Cushing's syndrome.[42] The increased glucose in blood and urine is derived only in part from increased protein breakdown, suggesting an actual defect in peripheral glucose utilization. This is further substantiated by the presence of considerable insulin resistance (analogous to that found in idiohypophyseal diabetes[43]).

The responsiveness of the adrenal gland to ACTH stimulation as measured by glucose metabolism varies among different persons. A similar variation has recently been confirmed for electrolyte metabolism.[44] The possibility exists, therefore, that long continued overproduction of pituitary ACTH in a person with a responsive adrenal cortex and a susceptible pancreas might account for some cases of human diabetes. However, there is as yet no direct evidence in support of this interesting hypothesis.

Clinically, a similar insulin-resistant diabetes occurs in Cushing's syndrome. One case, with marked hypertrophy and hyperplasia of the adrenal cortexes, was found to excrete large amounts of adrenocortical hormone Compound F.[45] Conversely, the bilateral removal of normal adrenal glands in a twenty-nine-year-old diabetic woman using 75 to 85 units of insulin daily resulted in a decrease in insulin requirements to 25 units a day.[46] This is the first direct physiologic assay of the influence of the normal adrenal glands upon human carbohydrate metabolism.

Various investigators have reached the conclusion that the growth and diabetogenic hormones of the anterior pituitary body are probably inseparable if not identical.[47, 48] The pituitary diabetogenic and hexokinase-inhibiting factors seem to be closely related but not identical, for, on standing, a mixture of the two may lose the latter activity. However, this activity may be restored in the rat by injection in vivo.[49]

There has long been speculation regarding the existence of a pancreotropic hormone of the anterior pituitary gland. Recent experiments in the growing rat have brought to light an unsuspected functional responsiveness and even change in size of the pancreatic beta cells (with variations in diet).[34, 50] Encouraged by this, Young[42] has recently used a nondiabetogenic extract of the anterior pituitary gland in an attempt to ameliorate the permanent (pituitary) diabetes of an adult dog. This diabetes is progressive. He found that, at the milder stage, the diabetes was temporarily ameliorated by a week of such therapy. Later, when the diabetes had become more severe, this effect was not obtained unless insulin was simultaneously administered. This is an interesting and new therapeutic approach to diabetes. Beaser[51] has attempted, without success, to influence the alloxan diabetes of rabbits with estrogen derivatives.

Diagnosis

The importance of early diagnosis has been emphasized by Beaser[52] through a survey showing that delay in early diagnosis and treatment may result in progression, complications and increased insulin needs. A new, simple and convenient and yet accurate blood sugar screening set has been made available by Eli Lilly Company on the basis of the work of Wilkerson and Heftmann.[53] This now enables any general practitioner to screen patients who have glycosuria.* Diabetes exists in probably a third or more of adults who have glycosuria.

When a glucose tolerance test is performed on such patients some 20 per cent yield atypical curves, which have either a high one-hour peak or a delayed return to normal, but not both. This has long presented a problem in interpretation. Rabinowitch[54] has reported on such a group of patients followed for over ten years. Of these, 29 per cent went on to develop diabetes, the incidence being significantly greater among those who remained obese and those with a family history of diabetes. To clarify such diagnostic difficulties, Horwitt et al.[55] have studied the blood pyruvate and lactate

*This set may also prove very useful in the control of treatment.

curves during glucose tolerance tests and believe that the delayed rise seen in diabetic persons provides a means of distinguishing them from patients with other types of hyperglycemia.

Psychiatric Aspects of Therapy

Most diabetic patients, unfortunately, continue to fall far short of the ideal goal of normoglycemic control. In most cases, especially the milder ones, the reason continues to be mainly lack of patient co-operation. Accordingly, any light that may be thrown upon the psychiatric behavior of diabetic persons is of major interest.

Bruch[56] has made a careful study of 21 diabetic children. No common characteristics featured this group, unlike a group of obese children that she had previously studied. However, the success in physiologic control was shown to mirror the "psychological climate of the home," which was determined by three types of attitudes on the part of the parents: hostile or masochistic; perfectionist; and relaxed and tolerant. The last two resulted in the best physiologic control, whereas the first two had the least desirable psychologic effects on the impressionable children. This information may also be applied with profit to adults and even to physician-patient relations.

Emotional disturbances may be shown to exercise a measurable effect on glucose and ketone metabolism,[57] but not sufficient to precipitate acidosis. A study of patients who have repeated attacks of frank acidosis showed that such patients required more to explain their difficulties than instability or severity of their diabetes.[58] They have, as a group, gross instability of personality organization, in many bordering on the psychotic, but no uniform pattern could be discerned. In such cases, simply focusing more carefully on the details of regulation accomplished little. It was found vital for the rehabilitation of such patients to recognize their antipathy to authority and their need for sympathetic social and psychiatric care, even at the sacrifice of some measure of perfect control.

(To be concluded)

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CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Weekly Clinicopathological Exercises

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor*

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CASE 36291

PRESENTATION OF CASE

First admission. A fifty-two-year-old bartender was admitted for repair of a right scrotal hernia.

The patient had been told that he had a "touch of gout" and a "skipping heart" for years. Physical examination, in addition to the hernia, showed an irregular heart rhythm, with a rate of 80 to 90. Urinalysis was negative; the blood nonprotein nitrogen was 19 mg., and the blood uric acid 2.7 mg. per 100 cc. The operation and convalescence were uneventful.

Second admission (five years later). The patient was readmitted because of an attack of gross hematuria. He had been well in the interim up until one week previous to this admission, when he noted easy fatigability and weakness. The right knee became swollen, and the urine was noted to contain gross blood. This lasted for four days.

He had had slight nocturia of some years' duration, but no frequency, dysuria or hesitancy. For two years he had exertional dyspnea with palpitation, usually coming on after a heavy meal or on climbing stairs. There was no history of chest pain or ankle edema. Up until five years previous to admission for a period of six years there had been intermittent swelling of the knees, ankles and left great toe lasting from a few days to a few weeks. There was a history of heavy alcoholic intake up until two years previous to this admission.

Physical examination showed a palpable, firm nodule in the right lobe of the thyroid gland, cardiomegaly, auricular fibrillation, a Grade III apical systolic murmur and a recurrent inguinal incisional hernia. The lungs, abdomen, extremities and prostate were negative.

The temperature was 99°F., the pulse 96, and the respirations 20. The blood pressure was 155 systolic, 110 diastolic.

Urinalysis showed a specific gravity of 1.005 and 10 to 12 red cells and 3 or 4 white cells per high-power field in the sediment. Cystoscopy demonstrated a normal urethra and bladder. The ureters were easily catheterized, clear urine coming from each. A retrograde pyelogram disclosed a calculus in the region of the left middle calyx. After injection it was noted that this appeared to be in a cavity. The patient was discharged on the second hospital day.

Third admission (two months later). In the interval he was followed in the Out Patient Department. The serum calcium was 9.2 mg., the phosphorus 3.3 mg., the alkaline phosphatase 3.1 units, the total protein 6.8 gm., the uric acid 4.7 mg., and the nonprotein nitrogen 18 mg. per 100 cc. Guinea-pig inoculation of the urine was negative for tubercle bacilli. X-ray study of the chest showed the heart to be markedly enlarged in all

chambers but more so on the left. A gastrointestinal series and x-ray examination of the neck were negative.

The patient had been passing small amounts of blood in the urine intermittently since the previous admission. However, his strength and appetite were good. There were no new symptoms, and physical examination, an x-ray film of the chest, an electrocardiogram and laboratory data were essentially the same as at the previous admission.

Urinalysis on admission showed a specific gravity of 1.018, a + test for albumin and 100 red cells per high-power field in the sediment. There were abundant colon bacilli and *Staphylococcus aureus* on culture. A urinary determination for cystine was negative, and a twenty-four-hour urinary specimen revealed a total calcium excretion of 48 mg.

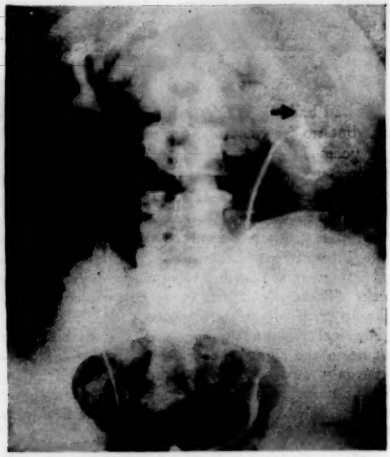

FIGURE 1. *Retrograde Pyelogram.*
Arrow points to nonfilling of the left upper calyx.

On the sixth hospital day a nodule was excised from the right lobe of the thyroid gland under local anesthesia. The pathological report was nontoxic nodular goiter, with organized and canalized hematoma. He was discharged on the fifth postoperative day after an uneventful convalescence.

Fourth admission (seven months later). The patient had been well except for one episode of passing dark-red blood in the urine for a few hours six weeks previously. A retrograde pyelogram (Fig. 1) showed a rounded calcium density overlying the left kidney measuring 7 mm. in its greatest dimension. The left kidney was slightly lower than the right and appeared slightly larger. On the left only the middle and lower calyxes filled. The calcium density appeared to lie within a major calyx, which came off close to the renal pelvis. The right ureter, pelvis and calyxes were normal. The hemoglobin was 12.8 gm., and the white-cell count 8000. Urinalysis showed a specific gravity of 1.012, a + test for albumin and an occasional red cell and 10 white cells per high-power field. Urine cultures were negative. He was discharged on the second hospital day.

Fifth admission (six weeks later). The patient had been well and had worked until a week previous to this admission. Then after passing "lemon-colored" urine he experienced chilly sensations followed by fever and malaise and accompanied by urinary frequency of once an hour, with some burning on micturition. This condition gradually abated over the next five days. For the twenty-four hours prior to admission he took one sulfonamide tablet every four hours, and on admission the symptoms had completely disappeared and the urinary frequency was every four hours. He believed that he had lost 10 to 15 pounds in the six weeks prior to admission. He was taking digitoxin, 0.2 mg. every day, and on this medication was no longer bothered by dyspnea or palpitation. There had been no recent attacks of joint pain.

Physical examination revealed slight distention of the neck veins, a moderately irregular pulse, cardiomegaly and a Grade II apical systolic murmur. The liver edge was palpable two finger-breadths below the costal margin. There was moderate tenderness and voluntary spasm in the left upper quadrant of the abdomen to bimanual palpation. The right inguinal incisional hernia was easily reducible.

The temperature was 99°F., the pulse 94, and the respirations 25. The blood pressure was 130 systolic, 90 diastolic.

Examination of the blood revealed a hemoglobin of 13.4 gm. and a white-cell count of 13,300. Urinalysis showed a specific gravity of 1.010 with a ++ test for albumin and innumerable white cells in the sediment. Culture of the urine grew a few colon bacilli. The nonprotein nitrogen was 37 mg. per 100 cc. An electrocardiogram and chest x-ray film were as before.

On the fourth hospital day the temperature was 101°F. The patient complained of pain in the right great toe, which externally appeared normal. Tenderness in the left upper quadrant to bimanual palpation was still present, and there was no costovertebral-angle tenderness. The white-cell count was 11,500, with 84 per cent neutrophils. On the following day the temperature was normal, and he felt well, but there was some swelling, redness

and warmth of the right knee thought to be mainly periarticular. The blood uric acid was 5.6 mg. per 100 cc., and the basal sedimentation rate was normal. An intravenous pyelogram was essentially similar to previous pyelograms except that on the left, in addition to a nonfilling superior calyx, there was incomplete filling of the middle calyx. Following 1 cc. of Mercuhydrin intramuscularly he lost 4 pounds in weight, the liver was no longer palpable, and the neck veins were less distended. By the thirteenth hospital day the temperature was normal, the knee was no longer swollen, and there were no subjective complaints. On the fourteenth hospital day an operation was performed.

Differential Diagnosis

Dr. Richard Chute*: In this case it seems to me that we are dealing with three abnormal conditions — gout, heart disease and a renal lesion. I should like to start with the first two, and then discuss the renal lesion last.

There is no doubt that this patient had gout. The considerable period of years during which he had had intermittent attacks of swelling and pain in various joints, including the great toe, the steady increase of the blood uric acid to an eventual abnormally high value of 5.6 mg. per 100 cc. (normal, 2 to 4.5 mg. per 100 cc.), his age and his occupation (bartender), with his alcoholic history, all lead me to a diagnosis of gout. Tophi are not mentioned, but they occur in only about 50 per cent of cases of gout and therefore are not necessary to make the diagnosis.

Secondly, the patient went into congestive heart failure. Although hypertension was not a feature, the heart was markedly enlarged, suggesting long-standing inadequacy. Even though no history of rheumatic fever is given, enlargement of the heart, with a loud apical systolic murmur, is very suggestive of mitral-valve damage with regurgitation. Also, auricular fibrillation is frequently associated with chronic rheumatic heart disease, especially mitral stenosis. Another possible etiology of the cardiac disturbance, although I do not believe that it has to be considered seriously in this case, is degenerative cardiovascular disease, which may be a complication of late gout and may lead to coronary or cerebrovascular accidents. The vascular lesions in gout are nonspecific and contain no tophi, but intracardiac tophi have been seen. However, in my opinion, the whole picture of this patient's cardiac trouble can be best explained on the basis of an old rheumatic heart disease.

Apparently, the nodule in the thyroid gland that turned out to be a nontoxic nodular goiter was noncontributory.

*Associate visiting urologist, Massachusetts General Hospital.

Now we come to the renal lesion. The patient had been known to have hematuria on and off for many months. Since the urinary bladder and urethra were normal, the evidence indicated that the blood came from above the level of the bladder, and presumably from the pathologic-appearing and tender left kidney. Tumor in the urinary tract is the most frequent cause of hematuria, and when one is dealing with a patient in the cancer age (fifty-seven), malignant tumor is by far the most common source of blood in the urine. The loss of considerable weight during the six weeks prior to the last admission, despite the accumulation of fluid due to cardiac decompensation, is compatible with cancer. However, he was not anemic, and it must be remembered that he was taking digitoxin, which might have cut down his appetite and thus his weight. Stone is also a not uncommon cause of hematuria, and has to be seriously considered in this case. Renal tuberculosis may cause bleeding, but that was thought of and pretty well ruled out by the fact that the guinea pigs inoculated with urine proved to be negative for tuberculous infection.

May we see the x-ray films, Dr. Wyman?

Dr. Stanley M. Wyman: The first chest film taken four years previous to the last admission shows a heart markedly enlarged, particularly to the left, probably in the region of the left ventricle and the left auricle. It pushes the esophagus posteriorly. The aorta is quite tortuous — in keeping with the known hypertension. The displacement of the esophagus is well demonstrated on a film taken three years later, this being due to the enlarged left auricle, which I think, as Dr. Chute has suggested, is quite consistent with rheumatic heart disease. There is some pulmonary congestion. The stomach reveals no intrinsic disease. There is a small diverticulum of the second portion of the duodenum. The pyelograms were done over a period of approximately a year prior to the last entry, and they show a focal density on the left that measures 7 mm. in diameter. The original examination fourteen months prior to the last examination shows the kidney shadows to be fairly symmetrical; the upper pole of the left kidney, however, is not well seen. The calyxes of both kidneys are well outlined by the original retrograde examination, and some localized hydronephrosis about the stone is seen. There are no other very gross changes. The last film, taken almost a year later, shows the left kidney to lie considerably lower in position than previously. At this time the upper major calyx fails to fill. It is impossible for me to outline the left kidney adequately, but its upper pole certainly seems a little fuller. The last examination by intravenous pyelogram shows essentially the same findings as the retrograde — namely, downward displacement of the left kidney and inadequate filling of the upper

and middle major calyxes. I think it is worth noting that the lateral middle major calyx seems to be displaced on the retrograde and intravenous pyelograms when compared to the original retrograde examination.

DR. CHUTE: Let us discuss what could give the picture of calcification and apparently a growing mass in the upper pole of this kidney. Of course, the perfectly obvious thing is tumor. Incidentally, tumors rarely have calcified flecks in them, but I think this picture is rather different from that. This calcified shadow is rather interesting in appearance because it is in a ring shape, which may mean calcification of either the splenic or the renal arteries or occasionally a renal aneurysm, which I think would be a little more medial in position. However, its position within the kidney outline suggests that it really was a stone. Tuberculosis might give calcification, but probably of a more diffuse or mottled character, and I doubt if it would cause a growing lesion in the upper pole. Another possibility is calcification of the wall of a cyst, but the cyst could also be seen. Another thing that probably would not produce calcification, however, is carbuncle of the kidney. This patient's hematuria over a good many months makes me believe carbuncle was not present. Calcified mesenteric lymph nodes are very common, but they tend to shift around and are characteristically mottled in appearance. Therefore, I shall make the obvious diagnosis and say that I believe this patient had a stone and also a kidney tumor, presumably renal-cell carcinoma.

DR. WALTER S. KERR, JR.: The kidney was easily palpable and was about three times the normal size.

DR. CHUTE: That makes me feel happier temporarily.

CLINICAL DIAGNOSIS

? Left renal tumor.

DR. CHUTE'S DIAGNOSES

Renal-cell carcinoma.
Nephrolithiasis.

ANATOMICAL DIAGNOSES

Papillary carcinoma of kidney, with lymph-node metastasis.
Nephrolithiasis.

PATHOLOGICAL DISCUSSION

DR. TRACY B. MALLORY: Dr. Kerr, I believe you operated upon this patient.

DR. KERR: It seemed most likely that the kidney contained a tumor, and we thought the most likely tumor was a renal-cell carcinoma as Dr. Chute did. The kidney was exposed and found to be very firm on its surface, and resection was carried out. Several enlarged lymph nodes near the aorta, one of which was over 1.5 cm. in size and was probably involved by tumor, were also removed.

DR. MALLORY: The upper pole of the kidney was swollen and very firm. On section a comparatively small papillary tumor was found in the upper calyx, which was continuous with an infiltrating tumor mass, 6 cm. in diameter, extending through the renal substance to, and in one spot through, the capsule into the perirenal fat. A small abscess cavity with necrotic walls that communicated with the pelvis was present near the center of the tumor. Histologically, the tumor was a characteristic papillary carcinoma of transitional epithelium, but the degree of invasion of the renal parenchyma was unusual. A calculus about 8 mm. in diameter was present in the upper calyx. One of the lymph nodes showed metastasis.

DR. BENJAMIN CASTLEMAN: Do you think the stone had anything to do with the tumor?

DR. MALLORY: Of course, in the gall bladder there is a very close association between gallstone and cancer. I do not know whether they have any similar relation in the kidney.

DR. FLETCHER H. COLBY: I think the greatest concern about stone associated with tumor in the kidney is that the association is more likely if the stone lies within the renal pelvis than in the parenchyma.

DR. CASTLEMAN: We have had 1 case* that I recall in which the patient had numerous stones in the pelvis and calyxes, leukoplakia of the pelvis, foci of carcinoma in situ and a frank squamous-cell carcinoma.

*Case Records of the Massachusetts General Hospital (Case 30442), *New Eng. J. Med.* 231:633-636, 1944.

CASE 36292

PRESENTATION OF CASE

A fifty-two-year-old tannery worker was admitted to the hospital for the first time because of hemoptysis.

The patient had considered himself in rather good general health in spite of a chronic cough, which had progressed insidiously over a period of twenty years. This, at first, was productive of a few teaspoonfuls of white sputum, but two years before admission the amount increased to half a cupful daily and the sputum became thick, yellow and bitter tasting. Six months prior to admission there was a sudden hemoptysis of about 200 cc. of bright-red blood. Following study at a tuberculosis sanatorium the patient was told that he had bronchiectasis and was discharged. Since that time he noted rather constant blood streaking of his sputum. On the day of admission he experienced a second massive hemoptysis, lasting fully thirty minutes, during which he coughed up an estimated

800 cc. of bright-red blood. This was associated with a shaking chill and a sensation of generalized weakness.

Throughout the past twenty years the patient had numerous upper respiratory infections during which the cough became worse, numerous episodes of tonsillitis and laryngitis each winter and frequently a sensation of stuffiness in the nose and "bronchial tubes." During the past few years there was a gradual onset of shortness of breath on exertion and paroxysms of coughing at night relieved by sleeping on his stomach. In the two years prior to admission he experienced several episodes of severe left-shoulder pain radiating through to the nipple, intensified by deep breathing and coughing and relieved by taping. There had been no fever or night sweats. An attack of pneumonia occurred two years before entry and was treated successfully at home with sulfonamides and penicillin. For two months prior to admission the patient noted easy bruising, particularly of the legs, but no other bleeding tendencies were observed.

There was no family history of tuberculosis.

Physical examination revealed an acutely ill, apprehensive man with a warm, pale skin and a frequent cough. The tonsils were large. The chest was asthenic, with dullness to percussion over the left base posteriorly. Expansion, breath sounds and voice sounds were diminished in the same area. Occasional expiratory rhonchi were heard in the left lower chest, and there was retraction of the left supraclavicular and subclavicular fossas. The heart sounds were distant, with the aortic second sound equal to the pulmonic. The peripheral pulses were full and regular. The abdomen was normal. Numerous bruises were present over the right heel and ankle. There was no clubbing of the digits.

The temperature was 101°F., the pulse 80, and the respirations 20. The blood pressure was 120 systolic, 80 diastolic.

Laboratory studies showed the urine to be normal except for occasional hyaline casts in the sediment. The hemoglobin was 10 gm., and the white-cell count 10,800, with 72 per cent neutrophils, 20 per cent lymphocytes and 8 per cent monocytes. Platelets were considered adequate. The bleeding time was 3 minutes, and the clotting time 12 minutes. A stool was guaiac negative, as was the blood Hinton test. The prothrombin time was 55 per cent of normal. The cephalin-flocculation test was ++ in twenty-four and forty-eight hours. The nonprotein nitrogen was 23 mg., the total protein 6 gm., the albumin 3.8 gm. and the globulin 2.2 gm. per 100 cc. A chest x-ray film showed extensive patchy areas of increased density in the region of the left lower lobe. When examination was repeated on the following day, there was an increase in the patchy densities, with interspersed areas of decreased density.

Shortly after admission the patient experienced a sudden hemoptysis of 1000 cc. followed by marked respiratory distress from which he recovered promptly. A second hemoptysis of 1000 cc. occurred early in the morning of the seventh hospital day. With each attack the patient developed a shock-like state, with hyperpnea, tachycardia and hypotension. This was always relieved by prompt administration of blood and sedation. A total of 4000 cc. of blood and 500 cc. of packed erythrocytes were given over this period, and the blood hemoglobin became elevated to 13.5 gm. Direct laryngoscopy on the third hospital day showed no bleeding points. Following the first bleeding the patient developed rales and rhonchi throughout the entire chest. These persisted but were most marked in the left lower thorax.

On the seventh hospital day, after another massive hemoptysis, an emergency surgical procedure was performed.

Differential Diagnosis

Dr. John Cass*: May we see the x-ray films now?

Dr. Stanley M. Wyman: On the outside films taken a little more than a month before admission there is some mottled increased and decreased density in the left-lower-lung field, which one month later has diminished considerably in extent. The original films on entry show the density to be differently distributed and to be in the basal segment of the left lower lobe. The films taken one day later show considerable increase in the process, and on the grid film according to the protocol, the rarefactions are interspersed with increased densities. The left lower lobe is seen to be moderately atelectatic in the lateral view, the basal segments only being involved. Apparently, the superior and subsuperior segments are spared. There is just a suggestion — I would not dare to go any farther — of something lying in the lower-lobe bronchus. It is insufficient for a definite statement.

Dr. Helen Pittman: Dr. Mallory, would it be appropriate for me to say a few words about how this case appeared to us who actually saw him?

Dr. Tracy B. Mallory: Yes, if you would.

Dr. Pittman: This man was perfectly well until he had sudden hemoptysis of about 200 cc. of blood. Then the picture as we got it from him was that he was again perfectly well. Neither Dr. Scannell nor I have any impression of the constant blood streaking of which the protocol speaks. The patient was perfectly well until the day of admission, when he had this enormous hemoptysis. On admission while the student was taking the history, a liter of blood welled up in about twenty minutes. In the hospital there were three massive hemoptyses, each occupying a space of about fifteen minutes. At that stage we mobilized all the forces of the Thoracic Surgery and the Anesthesia services to see what

*Assistant physician, Massachusetts General Hospital.

we could do if another occurred, and Dr. Scannell was constantly on the alert for it. The patient was scheduled for an elective operation and had been given transfusions with an enormous amount of blood and packed red cells to bring the hemoglobin up to 14 gm. Suddenly, about 4 o'clock on the morning scheduled for operation, he had another massive hemorrhage and went into shock, with marked air hunger. Dr. Scannell saw him at 6 o'clock and immediately sent him to the operating room, where he was bronchoscoped and operation undertaken.

DR. CASS: Thank you. I do not know whether that makes it any easier or not.

In general, the term hemoptysis means bleeding from the lung. However, that does not always hold true. There is one recent experience of mine in which the patient, the physician who sent the patient to the hospital, the physician who examined the patient in the Emergency Ward and I accepted an attack of bleeding as a hemoptysis and thought the diagnosis was probably bronchiectasis. Later on we found to our amazement that what had actually happened was that the patient had a crust of bread stuck in a hiatus hernia, had raised a tremendous amount of blood, had aspirated the blood into the lung and had then spat it out. In the case under discussion today there seems to be little reason to doubt that the blood came from the lung.

The next question is whether to accept a present illness of twenty years or one of two years. The descriptive term chronic cough is so loosely used that it may mean little, particularly in a smoker, so that the present illness may have been only of two years' duration rather than twenty years, which is the impression one gets from the history. A hemorrhage occurring after twenty years would be rather late in the course of most chronic illnesses, such as bronchiectasis, benign adenoma and tuberculosis. If this man's illness had been of twenty years' duration we would expect him to have had hemorrhage before this time although that is not necessarily true. The shaking chill and general weakness are part of the acute hemorrhage, I believe. The episodes of upper respiratory infections and tonsillitis are part of the syndrome of nontuberculous pulmonary disease and are common in the history of any of the chronic conditions. The fact that the patient had relief from the paroxysmal cough in certain positions means that in those positions at least there was a little drainage from the lesion into the bronchus or else that the bronchus was partially obstructed. The pleural pain is also compatible with any nonspecific bronchial infection. The attack of pneumonia, too, can be part of the syndrome.

Two months before admission he noticed that he bruised easily, and on physical examination at the time of entry there were numerous bruises of the right heel and ankle. One wonders whether there is some general reason why this patient bled freely. A clotting time just on the upper border of normal, a prothrombin time slightly low in percentage of normal and a cephalin-flocculation test just on the border of normal do not seem to be definite enough to justify a diagnosis of blood dyscrasia or liver disease sufficient to cause an increased bleeding time, but they are suggestive as an explanation for excessive bleeding.

The physical signs help to localize the lesion, and the occasional expiratory rhonchi suggest partial bronchial obstruction. The chest examination bore out the fact that there was a lesion in the left lower lobe associated with some degree of bronchial obstruction. That there was no clubbing of the digits is interesting, but that is a very indefinite sign and can occur with brief illnesses and sometimes does not occur with prolonged illness, particularly when there has been no cyanosis.

The increasing momentum of these massive hemorrhages in my inadequate experience is certainly unusual in any condition other than terminal tuberculosis. Heroic efforts must have been made just to keep the patient from drowning in his own blood. In the usual case of pulmonary hemorrhage a sufficient amount of time is allowed adequately to prepare for whatever procedure is necessary. The X-Ray Department has a day or two to carry out all its procedures, from plain films to laminograms and so forth; there is time for bronchoscopy and for proper sputum examinations so that one arrives very easily at an opinion what to do — whether the problem is medical or surgical. I have the impression that all one can say is that there was some chronic pulmonary disease of the left lower lobe, associated with bronchial obstruction. For some reason the hemorrhage was so marked in this particular case that its treatment came first rather than the diagnosis, and the hand was forced to some procedure that would stop the bleeding and save the patient's life. I judge that the patient had an emergency lobectomy or pneumonectomy, and that the underlying disease was an area of some type of nontuberculous bronchial obstruction with multiple areas of bronchiectasis and cavitation behind it. If we accept the present illness as of twenty years' duration it would rule out cancer, and I would have to make a diagnosis of some type of benign lesion such as a benign adenoma. If this assumption is wrong and the illness had not existed so long, I would be justified in making a diagnosis of a cancer as the cause of bronchial obstruction. Perhaps the blood chemical and laboratory findings mean that the patient also had some minor degree of liver disease, but I cannot make that diagnosis on the basis of such slight evidence. That he worked in a tannery may need comment. Such people are exposed to benzene and other products that are so new that very little is

known about their toxicity, and such people will have blood dyscrasias causing bleeding at times, but we have no evidence to justify this diagnosis.

My diagnosis is benign adenoma with multiple areas of cavitation and bronchiectasis and with erosion of a large vessel. The bleeding probably was not influenced by any general hemorrhagic tendency but was entirely a local problem.

DR. PITTMAN: This was a problem that was new to all of us who saw the patient. It was a most terrifying thing. He was exsanguinating himself without any adequate explanation for it. He did have a prolonged prothrombin time and we thought the prolongation consistent with bronchiectasis, but none of us had ever seen patients with bronchiectasis bleed as he did. I think Dr. Scannell's preoperative diagnosis was bleeding adenoma.

DR. J. GORDON SCANNELL: We had presumptive evidence that the patient had disease in the left lower lobe, but remarkably few people were willing to exclude disease in the right side as well. Furthermore, the trachea was narrowed, but no definite abnormality could be made out. When I first saw him after the third bleeding episode he had stopped bleeding, — probably the result of the classic treatment of bloodletting to stop pulmonary hemorrhage, — and inasmuch as he had a high fever and rales in both sides of the chest, we considered it wisest to withhold surgery. We planned to bronchoscope him after he had been stabilized, and then to go ahead with thoracotomy if we then precipitated another massive hemorrhage or if we could arrive at a more definite diagnosis.

The problem in a person with massive pulmonary hemorrhage is not only one of diagnosis and blood replacement but also one of anesthesia. Furthermore if massive hemorrhage occurs during bronchoscopy, there is often little that one can do to control it. We believed, however, that bronchoscopy was indicated and, with the anesthetist and the operating room ready for thoracotomy, planned to go ahead on the seventh day.

The patient anticipated us by about six hours, and with this fourth hemorrhage our hand was forced. Before we actually opened the left chest, however, Dr. Bernard D. Briggs anesthetized him with cyclopropane and bronchoscoped him. We found just what we expected to find, a great deal of bright-red blood on both sides, possibly a little more on the left. The anesthesia and bronchoscopy did not start the bleeding up afresh, and we were able to proceed with thoracotomy with a fair degree of deliberativeness.

Upon opening the chest we found the pleural space to be free of adhesions except for a few filmy ones over the left lower lobe. The lobe itself looked and felt pretty normal, except that there was some accentuation of the vascular markings on its pleural surface, and it contained considerable blood. There was not a great deal of evidence of old inflammatory disease or signs of tumor or an aberrant vessel.

DR. CASS: The reason that I mentioned an emergency pneumonectomy was that I believed massive bleeding might have forced your hand.

FIGURE 1.

DR. SCANNELL: Had the patient been bleeding massively at the moment, we would have proceeded to pneumonectomy forthwith in this case, putting a tourniquet on the hilus. Fortunately, it was not necessary.

CLINICAL DIAGNOSIS

Bronchial adenoma.

DR. CASS'S DIAGNOSIS

Bronchial adenoma, with obstruction and bronchiectasis.

Anatomical Diagnoses

Squamous-cell carcinoma, Grade I, of lung, with massive hemoptyses.
Bronchiectasis.

Pathological Discussion

Dr. Mallory: We have a picture of the resected lobe (Fig. 1). One can see between the two segments of the toothpick what appears to be a polypoid mass in the lumen of a greatly dilated major bronchus. Actually, that mass turned out to be merely blood clot, but between the apparent polyp and the upper toothpick a slight granularity of the mucous membrane can be seen. It was thought at the time of gross examination that this was a localized bronchiectasis, with granulation tissue lining its wall. Sections through it showed that it was a squamous-cell carcinoma, remarkably well differentiated. A great deal of the tumor presented the appearance of carcinoma in situ extending rather widely over the epithelial surfaces and dipping down into the lymph nodes, but there was true invasion in other areas and at one spot the tumor had invaded a large artery that undoubtedly was the source of hemorrhage. I have seldom seen a squamous-cell carcinoma of the lung as well differentiated as this. It could almost be called Grade I, whereas Grades III and IV are far commoner in the bronchial tumors. It may have been present for a very considerable period, in view of the extensive surface development and the high degree of differentiation.

Dr. Scannell: I might add as a footnote that three months postoperatively the patient was doing well.

MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Annual Meeting, May 15, 1950

THE annual meeting of the Council was called to order by the President, Dr. Arthur W. Allen, on Monday, May 15, 1950, at 7:00 p.m., in the Georgian Room of the Hotel Statler, Boston.

Two hundred and fifty-one councilors were present (Appendix No. 1).

The Secretary, Dr. H. Quimby Gallupe, presented the minutes of the Council meeting of February 1, 1950, as published in the *New England Journal of Medicine*, issue of March 23, 1950, and moved their acceptance. The motion was seconded, and it was so voted.

Reports of Committees

Committee on Nominations — Dr. John J. Curley, Worcester North, *Chairman*.

The committee convened on April 5, 1950, and nominated the following officers of the Society for the year 1950-1951:

President, Dr. Leland S. McKittrick
President-elect, Dr. W. Richard Ohler
Vice-president, Dr. Patrick J. Sullivan
Secretary, Dr. H. Quimby Gallupe
Treasurer, Dr. Eliot Hubbard, Jr.
Assistant treasurer, Dr. Norman A. Welch
Orator, Dr. Donald Munro

Dr. Curley moved acceptance of the report. The motion was seconded, and it was so voted.

The President asked for other nominations. There were none.

Dr. Frank R. Ober moved that the Secretary cast one ballot for the slate. The motion was seconded, and it was so voted unanimously. The Secretary cast the ballot as directed. The President stated that the officers nominated had been elected The President presented Dr. Leland S. McKittrick who spoke as follows:

> I am a much more humble man than I was a year ago at this time up in Worcester.
>
> I have had a year to think a lot of things over, and I have had a pretty good year to have an excellent opportunity to see a little something of the challenge that American medicine is facing.
>
> I have had the privilege during that year of seeing the Society function under the guidance of a superb president. And for that I am truly grateful.
>
> I am going to need a lot of help this next year, and I am going to call upon and depend upon you as members of the Council, and as members of the committees that are appointed, to give me a lot of support, and I shall try to do a good job. And, in anticipation of that, I shall thank you now.

Dr. Allen then introduced the other officers.

Executive Committee — Dr. H. Quimby Gallupe, Middlesex South, *Secretary*.

The Secretary submitted the report (Appendix No. 2) of the Committee, which had met on April 12, 1950. He stated that 16 members were present.

Under new business he presented the report of the Subcommittee on Blue Cross-Blue Shield Problems in the form of two resolutions, which had been approved unanimously by the committee:

> It is not the policy of the Massachusetts Medical Society to commit its members to participation or non-

participation in any or all of the medical care programs in existence in the Commonwealth at this time.

A member of the Massachusetts Medical Society shall be free to elect or reject, without prejudice, participation in any or all of the medical care plans in existence in the Commonwealth at this time.

He moved approval of these resolutions. The motion was seconded, and it was so voted.

The second matter of new business was consideration of a letter to the Governor of Massachusetts from the Committee on Mental Health concerning the appointment of a new commissioner of mental health. The letter had been referred to Drs. Conlin and Barton for minor changes. The letter was read. Dr. Charles G. Hayden suggested a change in wording, and Dr. Charles C. Lund said the letter should be signed by the President and the Secretary as well as the chairman of the Committee on Mental Health.

The President asked if the letter so changed and signed would be acceptable to the Council (Appendix No. 3). The answer was in the affirmative.

The Secretary then stated that the property at 22 Fenway had been purchased as the new home of the Society. He said the property, together with that of the Boston Medical Library, gave the Society one of the very best medical-society headquarters. He complimented the Committee on Society Headquarters, the officers and Mr. Beckwith for their efforts.

The Secretary said the Executive Committee had voted unanimously to approve the transfer of $50,000 from the Reserve Fund to the Building Fund so that the new property could be finished and furnished properly. He moved that the Council approve this transfer of funds.

Dr. Howard Root seconded the motion, and it was so voted unanimously.

The Secretary said Dr. Earle Chapman had written to the American Medical Association asking for a list of health services in the various states and communities. The American Medical Association had replied that none could do it as well as the state medical society. The Executive Committee suggested that the listing of all health services be made by the co-ordinating committees in the districts and reported back through the co-ordinating committee of the Society. The Secretary moved that this be the method used. The motion was seconded, and it was so voted.

The Secretary then presented the report of the Committee on Finance to the Executive Committee (Appendix No. 2). He moved that the first recommendation — that the Council rescind its action on February 1, 1950, allocating $8000 in the 1950 budget for the refund to the district societies — be accepted. The motion was seconded, and it was so voted. Dr. Donald Munro questioned the propriety of the procedure, and the President ruled that discussion should follow the next motion, passage of which would require a two-thirds vote.

The Secretary then made the motion that the Council rescind its action of February 1, 1950, allocating the $8000 refund to the districts. The motion was seconded.

Dr. Munro said the money should be obtained by raising the dues or by an assessment. He believed Dr. Conlin's work was one of the most important in the organization.

Dr. Basil E. Barton read a vote of the Norfolk District Medical Society, passed before this meeting, against this method of obtaining the necessary money.

Dr. John J. Curley said Worcester North District agreed with the Executive Committee.

Dr. Robert W. Buck, Middlesex South, said the Committee on Finance believed this the best way under the circumstances.

Dr. Peirce H. Leavitt, Plymouth, favored this method, and stated that the districts needing money should raise it themselves.

Dr. Daniel Reardon, Norfolk South, favored the motion. Dr. Henry Stebbins said Essex South favored it. Dr. James M. Baty stated that Middlesex South had voted 40:1 in favor. Dr. Edward P. Bagg (Hampden) also favored the motion. Dr. Nicholas S. Scarcello (Worcester) said he proposed this method to the Committee on Public Relations. Dr. Charles J. E. Kickham (Norfolk) favored the motion. Dr. George W. Papen (Norfolk) expressed disapproval.

Dr. Allen G. Rice (Hampden) said his district councilors had changed their minds and were now in favor.

Dr. Patrick J. Sullivan (Berkshire) spoke in favor.

Dr. D. L. Halbersleben (Norfolk) disapproved.

Dr. J. A. McLaughlin (Plymouth) disapproved of the method.

Dr. John B. Butts (Worcester), chairman of the Committee on Legislation, said he wanted to correct some statements he had heard concerning the failure to oppose bills, one of which favored compulsory sickness insurance and the other permitting the admission of textbook testimony in malpractice suits.

He spoke as follows:

I am not going to reiterate what Dr. Scarcello has already said, being a member of the Council from Worcester.

However, as acting chairman of the Committee on Legislation for the past few months, I should like to correct a few misapprehensions that were propagated here this evening. One was that nobody had been to either of the meetings at the State House recently, one on the bill that required the introduction of textbook testimony and the other on the compulsory sickness insurance.

During the past year, at one of the meetings of the Committee on Legislation, Mr. Charles Dunn, who, as you know, is our legislative counsel, informed us to the committee's satisfaction that the introduction of textbooks, as testimony before or in legal hearings, was no a bad bill.

As a matter of fact, Mr. Dunn stated that it probably was better than the old way that we had of doing things.

Relative to the sickness insurance, let me say that last year the sickness insurance bill was defeated, as you all know, by a vote of 3.

Following this, the commission of 15 members, appointed by the Governor, the president of the Senate and the chairman of the House, held hearings throughout the State during the past year. As a result of these hearings, the majority report was submitted by ten members of the commission.

This majority report favored a compulsory State fund, which was to be derived from tax deductions, payroll deductions from the employees, with a corresponding amount from the employers.

The minority did not agree about whether the fund should be completely substantiated by insurance companies, or whether partly by insurance companies and partly by the State.

As a result of this, there were two hearings last week, one on Tuesday, and the other on Thursday, before the Committee on Labor and Industries.

On Tuesday the proponents, or those who favored the compulsory State fund were heard. On Thursday, the people who opposed the compulsory State fund were heard. There is at the present time no bill; this is proposed legislation.

As a result of these hearings, the Committee on Labor and Industries is to draw up a bill, and this bill in turn is to be submitted to the Committee on Ways and Means. The Committee on Legislation had agreed that after this bill had been submitted to the Ways and Means Committee, and Dr. Conlin knew of this, that we would then act, either in opposing or substantiating, or approving, or taking no action on the bill, depending upon what the provisions of this bill happened to be.

Dr. Conlin and the Committee and Mr. Dunn agreed that we were much better not to appear at these previous hearings last week, and that we should hold our fire until such time as we knew what the provisions of the bill were to be.

The President then called for a vote on the motion by a show of hands. The votes counted by tellers showed 223 for and 29 against. Dr. Allen declared the motion carried.

The Secretary moved approval of the second recommendation of the Committee on Finance that the amount refunded to the districts be nothing in 1950. The motion was seconded, and it was so voted.

The Secretary then moved that the third recommendation — that the $8000 that would have been refunded be added to the budget of the Director of Medical Information and Education — be approved. The motion was seconded, and it was so voted.

Committee on Public Relations — Dr. Harold R. Kurth, Essex North, *Secretary.*

Dr. Kurth presented the report as printed in the *Circular of Advance Information* (Appendix No. 4). He stated that the resolution concerning allotment of the funds to the budget of the Director of Medical Information and Education had already been disposed of. He made a motion to approve the resolution favoring turning over all surplus monies to the budget of the Director of Medical Information and Education rather than to the Building Fund. The motion was seconded. The Secretary stated that the Treasurer, the Committee on Finance and the Executive Committee all believed this step unwise. The motion failed to carry. Dr. Kurth (Essex North) moved acceptance of the report as a whole. The motion was seconded, and it was so voted.

Committee on Tax-Supported Medical Care — Dr. Albert A. Hornor, Suffolk, *Chairman.*

Dr. Hornor presented the report (Appendix No. 5) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Legislation — Dr. John B. Butts, Worcester, *Chairman.*

Dr. Butts presented the report (Appendix No. 6) as informational and moved its approval. The motion was seconded, and it was so voted.

Subcommittee on National Legislation — Dr. Charles G. Hayden, Middlesex South, *Chairman.*

Dr. Hayden moved approval of this informational report (Appendix No. 7). The motion was seconded, and it was so voted.

Committee on Publications — Dr. Richard M. Smith, Suffolk, *Chairman.*

Dr. Smith presented the report (Appendix No. 8) as informational and moved its acceptance. The motion was seconded.

Dr. Harvey A. Kelly (Suffolk) said that his district councilors had voted to request the Committee on Finance to review the financial relation between the *New England Journal of Medicine* and the Society toward making improvements. Dr. Gallupe, (Middlesex South) assured Dr. Kelly that steps would be taken and reported to the Council in October.

Dr. Smith's motion was then passed unanimously.

Commitee on Ethics and Discipline — Dr. Ralph R. Stratton, Middlesex East, *Chairman.*

Dr. Stratton presented the report of the Committee (Appendix No. 9) and made a motion that there be only one grievance committee and that on the state level, and that its name remain the same. (Dr. Stratton had inserted the words "and that" after the word "committee" in the report as printed.) The motion was seconded. Dr. Gallupe said a questionnaire sent to the other state societies had shown that 18 states had, or proposed having, grievance committees, and that nine tenths of them were to be publicized.

The motion was voted unanimously. Dr. Stratton moved approval of the second recommendation: that the public be made aware of the presence and activities of the Committee. The motion was seconded, and it was so voted. Dr. Stratton moved approval of the third recommendation — that the publicity be left to the discretion of the Director of Medical Information and Education. The motion was seconded.

Dr. Conlin (Suffolk) said he hoped to get the news releases out during the first week in June. The motion was carried.

Committee on Medical Education — Dr. Chester S. Keefer, Suffolk, *Chairman*.

Dr. Isaac R. Jankelson, Norfolk, presented the report (Appendix No. 10) and moved its acceptance. The motion was seconded, and it was so voted. He then made a motion to approve the first recommendation, that the Society express appreciation to the donor of the fund to provide the student awards. The motion was seconded, and it was so voted.

He made a motion to approve the second recommendation concerning the nominations for the awards of 1950. The motion was seconded, and it was so voted.

He then moved that the Council approve sponsoring one or more lectures for medical students on ethics, malpractice, animal experimentation and medical-society organization and objectives, and to inform the deans of the three medical schools that the Society is prepared to sponsor these lectures. The motion was seconded, and it was so voted.

Dr. Isaac R. Jankelson (Norfolk) moved that the Council approve the worthiness of the cause of the "Co-operative for American Remittances to Europe, Inc.," and suggested that a statement to this effect be published in the *Journal*. The motion was seconded, and it was so voted. He then made a motion to approve the report as a whole. The motion was seconded, and it was so voted.

Committee on Membership — Dr. Lewis S. Pilcher, Middlesex South, *Chairman*.

Dr. Pilcher presented the report (Appendix No. 11). He then made the following remarks:

> This report contains three recommendations, which I shall not read in complete detail, because they are printed.
>
> These recommendations essentially are to correct inadequacies of the present by-laws, which do not give the Treasurer authority that he feels is needed to collect certain dues and which do not protect district societies in collecting certain dues.
>
> The first recommendation is that a fellow may not be transferred from one district society to another until all assessments in the original district society have been paid in full up to, but not including, the year of transfer.
>
> This is to protect district societies in collecting dues from members who transfer, and who may be remiss in paying their dues, after they have been transferred, at the request of the Treasurer.
>
> I move that this recommendation be approved.
>
> The second recommendation has to do with nonresident fellowships. It is obvious that that is something where some power needs to be given to the Treasurer. It reads: "A fellow may not be transferred to a nonresident fellowship until all regular dues have been paid in full up to, but not including, the year of transfer."
>
> I move the acceptance of this recommendation.

Both motions were seconded, put to vote and unanimously carried.

Dr. Pilcher continued as follows:

> The third recommendation, in essence, is a slight change in the procedure of passing out the *By-laws and Code of Ethics* and so forth to applicants for membership. At the present time the *By-laws and Code of Ethics* are furnished each member after they have been admitted to membership, and after they have passed all examinations, and all their interviews.
>
> We believe that these things should be given to applicants before their interviews, particularly the applicants from unapproved schools and foreign schools, so that they will have an opportunity to study the *By-laws and Code of Ethics*, and furthermore, we recommend that in the course of their examination by the Board of Censors, they should be questioned on these matters.
>
> We recommend, at least, that they shall be liable to be questioned, so that they will read these ethical laws before they are admitted to membership. Once they have been admitted to membership, the Committee is afraid that a great number of them accept the *By-laws and Code of Ethics* and put them in the right-hand desk drawer. In this way, if they know they are going to be examined on them, they will read them. And it will involve very little extra expense to the Society, only a few of the applicants needing them.

He moved that this recommendation be approved. The motion was seconded.

Dr. Stratton stated that the Censors had a rule whereby a résumé of the *Code of Ethics* is to be given to each applicant when he makes his application. Each Secretary had a group of questions to be given to the applicant before he is examined. Two or three years previously that matter had been brought up and so decided.

Dr. Pilcher answered that the by-laws stated that the questions should be given to the member after admission to the Society. The present motion was to correct that statement in the by-laws.

Dr. Allen called for a vote, and the motion was carried.

Dr. Pilcher made a motion to approve the report as a whole. The motion was seconded, and it was so voted.

Committee on Public Health — Dr. Roy J. Ward, Worcester, *Chairman*.

Dr. Ward presented the report (Appendix No. 12) as informational and moved its approval. The motion was seconded, and it was so voted.

Committee on Pilot Clinics — Dr. Brooks Ryder, Suffolk, *Chairman*.

Dr. Dunlop (Worcester), presented the report (Appendix No. 13) as informational and moved approval. The motion was seconded, and it was so voted.

Committee on Finance — Dr. Robert W. Buck, Middlesex South, *Chairman*.

Dr. Buck presented the report (Appendix No. 14) with its two recommendations and moved approval of the report as a whole. The motion was seconded, and it was so voted without debate.

Committee on Industrial Health — Dr. Daniel L. Lynch, Norfolk, *Chairman*.

Dr. Lynch presented the report (Appendix No. 15) as informational and moved its approval. The motion was seconded and carried.

Committee on Council Rules and By-laws — Dr. Edward P. Bagg, Hampden, *Chairman.*

Dr. Bagg presented the report (Appendix No. 16) and then spoke as follows:

> The report contains some recommendations, which have previously been approved by the Council, with the exception of the last one, beginning with line 48, which read as follows:
>
> Chapter IV, Section 1: In the first paragraph after the comma following the word "Medicine," delete the remainder of the sentence and substitute the following: "as well as the president and the past presidents of the American Medical Association, the president of the Massachusetts Medical Service, and the medical director of the Massachusetts Medical Service provided they are members of this Society."
>
> The Committee is aware of the fact that the Council is already large, and hesitates to increase it, but in this instance the present recommendation is not likely to embarrass us in that direction, and it will correct a situation that will remove sources of embarrassment in the future.
>
> I am sure I speak for the Committee when we agree to delete the word "medical" before "director," as voted by the Executive Committee of the Council.
>
> Therefore, I recommend that this Council approve of the change in Chapter IV, section 1, as amended by vote of the Executive Committee.

The motion was seconded, and it was so voted. Dr. Bagg moved approval of the report as a whole. The motion was seconded and carried.

Committee on Benevolence — Dr. Dwight O'Hara, Middlesex South, *Chairman.*

Dr. O'Hara presented the report (Appendix No. 17) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Cancer — Dr. Ernest M. Daland, Suffolk, *Chairman.*

Dr. Daland presented the report (Appendix No. 18) as informational and moved approval. The motion was seconded and carried.

Committee on Hospital and Professional Relations — Dr. Albert E. Parkhurst, Essex South, *Chairman.*

Dr. Parkhurst presented the report (Appendix No. 19) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Maternal Welfare — Dr. Duncan E. Reid, Middlesex South, *Chairman.*

Dr. Gillespie, (Norfolk) presented the report (Appendix No. 20) as informational and moved its acceptance. The motion was seconded and carried.

Committee on Postgraduate Medical Education — Dr. W. Richard Ohler, Norfolk, *Chairman.*

Dr. Ohler presented the report (Appendix No. 21) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Dr. Ohler said that attendance at the courses given this spring in John Ware Hall was 2400.

Committee on Red Cross Blood Program and the Committee on Regional Blood Center — Dr. Lamar Soutter, Suffolk, *Chairman.*

Dr. Soutter presented the report (Appendix No. 22) and spoke as follows:

> The bulk of this report is informational, but there are three recommendations that require some explanation. The American Association of Blood Banks has requested approval by the Society, and has appended to its request a suggestion that the delegates from our Society to the House of Delegates of the American Medical Association be instructed to vote against the Red Cross program, as has been done in Texas.
>
> The members of the Committee are in favor of the Red Cross program, which has been voted upon favorably by the Society and by the American Medical Association. We believe that the removal of this program would be a great mistake, as far as the benefits to the patients and doctors in this state are concerned, as well as elsewhere.
>
> In 1948, when the American Association of Blood Banks obtained an adverse vote against the Red Cross in the New York County Medical Society, within forty-eight hours there were very critical editorials in both the *Herald-Tribune* and the *New York Times*, condemning the medical profession.
>
> We believe that if such a vote should get through the American Medical Association, or through this society, the medical profession would be severely hurt.
>
> Therefore, I move that the first recommendation, that this association should not be approved, be adopted.

The motion was seconded, and it was so voted. Dr. Soutter then continued:

> The second recommendation is "that the delegates to the American Medical Association from this state should be informed of the dangers of adopting the Texas Resolution."
>
> Every state medical society has been urged to vote against the Red Cross this year in the House of Delegates. I believe that the Red Cross program is sufficiently valuable here, and for the politcal reason, which I stated before, that our delegates should be informed of the dangers of adopting the Texas Resolution.
>
> The third recommendation is, "These committees further recommended that their memberships be combined to form one committee to be called, 'The Committee for the supervision of the Red Cross Blood Program.' "
>
> I move that both recommendations be approved.

The motion was seconded, and it was so voted. Dr. Soutter moved acceptance of the report as a whole. The motion was seconded and carried.

Committee on Diabetes — Dr. Howard F. Root, Suffolk, *Chairman.*

Dr. Root presented the report (Appendix No. 23) as informational and moved its approval. The motion was seconded, and it was so voted.

Committee on Fees — Dr. Richard H. Sweet, Suffolk, *Chairman.*

Dr. Sweet presented his report (Appendix No. 24) and spoke as follows:

> This is a new committee, and there was some question in our minds as we gathered together for deliberation about exactly what the intention of the Council was in establishing it, and what we might accomplish. Furthermore, there was some delay in the deliberations because of unexpected developments having to do with the Blue Shield. We therefore waited to see how that would turn

out, and finally brought our deliberations to a head after the Council action having to do with the establishment of the new Blue Shield program.

It seems to me and to the Committee that there was some dissatisfaction among the general public, at least, with the doctor-patient relationship, especially as it has to do with fees charged for professional services. This may lie beneath the surface, needs consideration, has been discussed and is mentioned in our report.

I should like to call attention to one or two items before going on to the recommendation:

> Several members of the Committee voiced the opinion, apparently held to a greater or lesser degree by others of the group, that in general the physicians of this state have become oversensitive to the importance of the fee problem and have tended to bend over backward in an effort to avoid criticism. It was pointed out by some that this position is to be deplored, partly because it may lead to a false sense of the importance of the difficulty that at most is not at present a large one and partly because such a supine attitude might militate against the welfare of the profession by playing into the hands of the cranks and political protagonists of governmental control. It was agreed that the dignity of the professions demands that the physician be allowed to adjust these matters with the patient according to the time-honored equitable principles of the code of ethics of physicians.

Already, in the report of the Committee on Ethics and Discipline, another matter has been mentioned — namely, the existence in the Society of a means by which difficulties of this sort can be adjusted.

My hope that something of more importance might come from the deliberations of the Committee was not realized, but it seems to me that we have explored the possibilities, and that by proceeding in a more definite manner, if the Committee is held over another year, some agreement might be reached regarding the over-all problem of the principles underlying the establishment of equitable charges for medical and surgical and professional services.

It seems to me that the time is ripe for the profession of this state and elsewhere to come to some agreement regarding the principles involved, and the report contains a brief summary of those principles.

In the second part of the report are the only two recommendations that I should like to point out. The first was that in order to avoid the misunderstandings and criticism on the part of patients regarding fees, it was voted that the members of the Massachusetts Medical Society be encouraged in all cases to attempt to come to an understanding with the patient by free discussion of the exigencies involved in each case at some time before a bill for services is rendered to the patient.

There was a great deal of discussion about that. It was merely brought up as a suggestion of principle, and it was made by the Committee as a recommendation.

The second recommendation was that the attitude of the Society regarding fees and the availability of means for the patient to obtain relief from possible overcharging be publicized by the Committee on Public Relations in whatever manner it may choose to adopt. It was the opinion of the Committee that this was of great importance, but that it was not the function of this committee to suggest the manner in which this should be carried out — whether it should be done by a statement to the press that we have a public-relations grievance committee, or whatever it may be.

I move that both recommendations be accepted by the Council.

The motion was seconded, put to vote and unanimously carried.

Dr. Sweet then moved that the report as a whole be accepted. The motion was seconded, put to vote and unanimously carried.

Committee on Redistricting — Dr. Charles G. Shedd, Suffolk, *Chairman.*

Dr. Shedd presented the report (Appendix No. 25) and moved its approval. The motion was seconded, and it was so voted.

Committee to Meet with the Massachusetts State Pharmaceutical Association — Dr. Frank N. Allan, Suffolk, *Chairman.*

Dr. Allan presented the report as informational (Appendix No. 26) and moved its acceptance. The motion was seconded and carried.

Report of the Treasurer

Dr. Eliot Hubbard, Jr., Middlesex South, presented his report (Appendix No. 27). He moved that this informational report be accepted.

The motion was seconded, and it was so voted.

Auditor's Report

The Secretary read the Auditor's Report as follows:

> The Auditing Committee appointed the firm of Hartshorn and Walter, accountants and auditors, to audit the books and accounts of the Massachusetts Medical Society. This audit and account are hereby approved by us.
>
> The analysis of the revenues and expenses of the Society and the balance sheet of the condition of the funds of the Society have been inspected and approved by us.

Dr. Gallupe made a motion to accept the report. The motion was seconded and carried.

Dr. Gallupe then made a motion to approve the report of the Executive Committee. The motion was seconded, and it was so voted.

New Business

The President introduced Dr. Egon E. Kattwinkel, Middlesex South, who read a program report on the Newton Heart Demonstration Program (Appendix No. 28).

Dr. Allen thanked Dr. Kattwinkel for the report.

Dr. Conlin said that the matter of a clinic or facilities to study obesity control had been submitted by the United States Public Health Service to the Health Commissioner of the City of Boston, who has, in turn, requested study and the opinion of the Massachusetts Medical Society.

Dr. Conlin asked that this matter be turned over to the proper committee. Dr. Allen referred it to the Committee on Public Health.

Dr. Milton J. Quinn, public-relations councilor of Middlesex East, read the following resolutions adopted at the annual meeting of his district society:

> Whereas, it is the opinion of the Society that every eligible person should exercise his right to vote, and
>
> Whereas, it has been shown that physicians, their families and their contacts have in the past been neglectful of exercising their privileges of voting, therefore
>
> Be it Resolved, that the Middlesex East District Medical Society should take active steps to urge each member, the voters of his family and circle of contacts to register, and then to vote at every election.

Be it further Resolved, that this Society instruct the Public Relations Councilor to inform the Council of the Massachusetts Medical Society of the above action, and recommends to the Council that similar action be taken on a state level.

Dr. Allen referred this matter to the Committee on Public Relations.

Dr. Allen presented Dr. Leland S. McKittrick, Suffolk, President-Elect, who spoke as follows:

I should like to say that these appointments have been made after availing myself of the advice of the retiring president, president-elect, the Secretary and, in some instances, Dr. Conlin.

I should like to say also that one cannot but be impressed with the large number of committees that this organization has.

It seems to me that a certain number of these committees, which have more or less fulfilled the purposes for which they have been created, might well be omitted at the present time.

In many instances I have written to the chairmen and I am going to ask your permission that committees whose chairmen have given approval in writing be discharged.

He then read the appointments to committees, and delegates to the American Medical Association and the other New England state medical societies. (Complete list follows the proceedings of the Annual Meeting.)

Dr. McKittrick made a motion to approve the appointments. The motion was seconded, and it was so voted.

Dr. McKittrick asked for permission to discharge the following Committees: Advisory Subcommittee on Medical Education, Representatives to the Hospital Presidents Association, Representative on the Legislative Committee of the Massachusetts Central Health Council, Representative to the Hospital Council of Boston, Committee to Meet with the Massachusetts State Nurses Association, Committee on Veterans Affairs, Committee to Meet with the Officers of the Bay State Medical Rehabilitation Center, Committee on Publicity Code and Committee to Co-operate with the Committees on Society Headquarters and Postgraduate Medical Education.

The Council gave permission by vote.

Dr. Allen then thanked the councilors for their co-operation during the year and said adjournment was in order.

A motion to adjourn was made and seconded and it was so voted at 10:25 p.m.

APPENDIX NO. 1

ATTENDANCE OF COUNCILORS

BARNSTABLE
D. E. Higgins

BERKSHIRE
J. H. Fierman
C. T. Leslie
P. J. Sullivan

BRISTOL NORTH
J. H. Brewster
M. E. Johnson
C. B. Kingsbury
J. L. Murphy
W. M. Stobbs

BRISTOL SOUTH
R. B. Butler
J. C. Corrigan
D. F. Gallery
R. H. Goodwin
William Mason
H. E. Perry
A. J. Pothier
Henry Wardle

ESSEX NORTH
Z. W. Colson
A. P. George
H. R. Kurth
P. J. Look
R. C. Norris
L. C. Peirce
F. W. Snow
F. N. Sweetsir
C. F. Warren
C. A. Weiss

ESSEX SOUTH
C. F. Twomey
W. D. Babb
Gerard Cote
J. J. Crowley
J. H. Fine
S. N. Gardner
A. E. Parkhurst
M. H. Pett
W. G. Phippen
H. G. Pope
E. D. Reynolds
H. D. Stebbins

FRANKLIN
L. R. Dame
J. E. Moran
W. D. Thomas

HAMPDEN
A. H. Riordan
M. S. Allan
E. P. Bagg
R. L. Barrett
A. J. Douglas
E. C. Dubois
Adolph Franz, Jr.
J. M. Gilchrist
A. M. Glickman
Frederic Hagler
D. R. Hayes
W. J. Kisiel
S. F. Potsubay
L. A. Putnam
A. G. Rice
G. L. Schadt
J. A. Seaman
H. N. Simpson
G. L. Steele
J. L. Chereskin

HAMPSHIRE
J. G. Pekala

MIDDLESEX EAST
T. P. Devlin
Robert Dutton
W. F. Hickey, Jr.
K. L. Maclachlan
H. L. Mueller
M. J. Quinn
R. R. Stratton

MIDDLESEX NORTH
H. R. Coburn
P. G. Berman
W. M. Collins
S. A. Dibbins
L. F. King
A. J. Stewart
J. D. Sweeney
H. A. Titus

MIDDLESEX SOUTH
J. M. Baty
J. D. Bennett
W. O. Blanchard
H. K. Bloom
G. F. H. Bowers
M. R. Brown
R. W. Buck
E. J. Butler
J. F. Casey
E. A. Cooney
W. H. Crosby
C. L. Derick
J. G. Downing
D. J. Duggan
A. G. Engelbach
W. C. Feeley
C. W. Finnerty
J. M. Flynn
H. Q. Gallupe
H. W. Godfrey
J. D. Golden
A. D. Guthrie
C. G. Hayden
J. A. Holmes
W. T. Good
Eliot Hubbard, Jr.
H. W. Hudson, Jr.
A. M. Jackson
F. R. Jouett
H. A. Kontoff
J. J. Lepore
A. A. Levi
A. N. Makechnie
R. A. McCarty
J. H. McSweeney
Dudley Merrill
C. E. Mongan
Fabyan Packard
L. S. Pilcher
Max Ritvo
L. G. Rondeau
M. J. Schlesinger
E. W. Small
H. P. Stevens
A. B. Toppan
C. F. Walcott
R. H. Wells

NORFOLK
W. R. Ohler
A. A. Abrams
C. E. Allard
B. E. Barton
Carl Bearse
Elizabeth Broyles
G. L. Doherty
Albert Ehrenfried
S. Friedman
T. R. Goethals
D. L. Halbersleben
H. B. Harris
R. J. Heffernan
P. J. Jakmauh
I. R. Jankelson
C. J. Kickham
C. J. E. Kickham
D. S. Luce
C. M. Lydon
D. L. Lynch
T. F. P. Lyons
H. L. McCarthy
R. T. Monroe
F. J. Moran
H. R. Morrison
D. J. Mullane
H. A. Novack
J. J. O'Connell
R. S. Palmer
G. W. Papen
H. C. Petterson
S. H. Proger
H. A. Rice
S. A. Robins
D. D. Scannell

L. A. Sieracki
S. L. Skvirsky
E. C. Smith
K. S. Snow
J. W. Spellman
W. J. Walton
N. A. Welch
W. A. White, Jr.
G. F. Wilkins
P. R. Withington
Marjorie Woodman
E. T. Wyman

NORFOLK SOUTH

F. A. Bartlett
D. L. Belding
R. L. Cook
F. Hinchliffe
E. K. Jenkins
N. R. Pillsbury
D. B. Reardon
R. G. Vinal

PLYMOUTH

J. C. Angley
P. H. Leavitt
D. A. Martin
C. D. McCann
J. A. McLaughlin
R. E. Swenson

SUFFOLK

A. J. A. Campbell
H. L. Albright
A. W. Allen
F. G. Balch, Jr.
C. H. Bradford
W. J. Brickley
E. M. Chapman
J. F. Conlin
A. P. DerHagopian
N. W Faxon
M. Fremont-Smith
Joseph Garland
G. L. Gately
A. A. Hornor
L. M. Hurxthal
H. A. Kelly
H. E. Kennard
F. H. Lahey
T. H. Lanman
R. I. Lee
C. C. Lund
C. F. Maraldi
H. C. Marble
L. S. McKittrick
W. J. Mixter
Donald Munro
H. L. Musgrave
F. R. Ober
J. F. O'Hare
L. E. Parkins
H. S. Pittman
J. J. Regan
Horatio Rogers
H. F. Root
C. G. Shedd
R. M. Smith
C. M. Stearns
Conrad Wesselhoeft
C. F. Wilinsky

WORCESTER

B. C. Wheeler
George Ballantyne
Jacob Brem
J. B. Butts
F. B. Carr
E. J. Crane
Paul Dufault
G. R. Dunlop
L. M. Felton
Thomas Hunter
H. L. Kirkendall
D. G. Ljungberg
J. A. Lundy
D. K. McClusky
J. W. McKoan
J. M. Olson
F. A. O'Toole
E. L. Richmond
N. S. Scarcello
R. J. Ward
J. J. Tegelberg

WORCESTER NORTH

J. J. Curley
K. J. Jolma
J. V. McHugh
C. N. McPeak

APPENDIX NO. 2

REPORT OF THE EXECUTIVE COMMITTEE

The meeting was called to order by President Allen at 1:15 p.m. on April 12, 1950, at the Harvard Club, with 16 councilors present. Besides the President and the Secretary, the President-Elect, the Vice-President and the Director of Medical Information and Education were present. The Secretary presented business referred to the Committee; the first was a report from the subcommittee on Blue Cross-Blue Shield Problems, Dr. Charles J. E. Kickham, chairman.

Dr. Kickham said that his committee had met on April 7 and had adopted the following resolutions:

> It is not the policy of the Massachusetts Medical Society to commit its members to participation or nonparticipation in any or all of the medical care programs in existence in the Commonwealth at this time.
>
> A member of the Massachusetts Medical Society shall be free to elect or reject, without prejudice, participation in any or all of the medical care plans in existence in the Commonwealth at this time.

The Secretary reminded the Committee that certain medical societies in the country had been threatened with suits because they had been accused of operating medical care plans in restraint of trade, and that this society had received two letters from two insurance-company employees complaining that certain doctors in Massachusetts have not been willing to co-operate with insurance plans other than Blue Shield. In view of this, it seemed important for the Society to state its policy, and the Committee had met for that purpose. Dr. Dame asked why the first resolution was in the negative.

Dr. Hayden replied as follows:

> So that we shall not commit our physicians to participate in a whole host of programs as they tried to do in Rhode Island. They said down there, in effect, come on, all you insurance companies, and we will commit our society with Aetna, John Hancock and anybody else that can qualify. In effect, the Society set itself up as an approving agency of contracts issued by a host of different insurance-company groups. And, until they found out that they were not getting anywhere in Rhode Island, that was the situation. And the Blue Cross plan down there was in the throes of writing a straight cash-indemnity program, which they were going to submit to the Rhode Island Medical Society for approval, so that they could participate along with the insurance companies in Rhode Island. That is what happened in Wisconsin, and there is a big fight on in that state between the Wisconsin Society and the Milwaukee County Branch, where they have a program run by the doctors, and in the rest of Wisconsin they have a group of seventeen insurance companies writing medical contracts. But in a few other states the medical societies have committed their members to participation in a particular type of program, and that was the reason why this was written as it was, as the first resolution.

Dr. Kickham moved approval of the first resolution. The motion was seconded, and it was so voted unanimously. Dr. Fallon moved adoption of the second resolution, and the motion was seconded by Dr. Curley. Dr. Hayden spoke as follows:

> This has been cleared with our attorneys. Mr. Twomey represents the Society, and Mr. Hardy Blue Cross. I have also cleared this with Howard Hazard, who is counsel for the California Medical Society and who lived through all the antitrust fight out in Almeida County. He is also counsel for the Blue Shield Commission, and a very smart fellow. I cleared it with Mr. Sherman in Chicago, who is counsel for the Blue Cross Commission. So it has been cleared from a legal standpoint, in case anybody asks the question whether it conflicts with the antitrust laws.
>
> The motion was passed unanimously.

Dr. Kickham moved that a committee be appointed by the President to draw up resolutions expressing the appreciation of the Society to Drs. James C. McCann and Elmer S. Bagnall for their tireless efforts in behalf of the Society and Blue Shield. The motion was seconded, and it was so voted. Dr. Allen appointed Drs. Hornor, Kickham and Curley.

The Secretary read a report from the Committee on Mental Health that consisted of a letter addressed to the Governor from the Society concerning the resignation of Dr. Clifton T. Perkins and the appointment of his successor. Dr. Fallon moved approval of the letter. Dr. Curley seconded the motion. After some discussion concerning the wording, an amendment was made to have the letter rewritten by Drs. Conlin and Barton. The amendment was seconded, and it was so voted. The main motion was then voted. It was the sense of the committee that the letter would back up the Governor and be helpful to him in making a good appointment.

The Secretary presented the report of the Committee on Membership concerning resignation, retirements and remission of dues. The report was accepted with one minor correction.

The Secretary then informed the committee that steps had been taken by the Committee on Headquarters to obtain the property at 22 Fenway, a building now occupied by a Massachusetts Institute of Technology fraternity, and that it included a 10,000-square-foot lot of land behind it. He spoke as follows:

> It seems likely that the Committee will be successful in closing the deal. The property will cost the Society in the neighborhood of $75,000. The Building Fund is now above $120,000, but $19,000 is in the form of a note

on a loan to the Library and is not available now. About $25,000 may be used to make major changes and additions to the building, and more money will be necessary to draw upon for refinishing and furnishing. Acquisition of this property will save us the rent we now pay for use of library space ($3,200), and it will give the Library more room to expand, if the Library puts on a drive for funds. 22 Fenway is a property that seems to fill all our needs for the foreseeable future, and the land will give room for expansion when necessary. If we can pass title on the property by June 15, the building might be ready for occupancy by the October Council meeting. Since most of the available funds of the Building Fund will be used for the purchase and major work, I move that this committee recommend to the Council that $50,000 of the reserve fund ($250,000) be transferred to the Building Fund to be drawn upon as needed for refinishing and furnishing the building.

The motion was seconded and carried unanimously.

The Secretary said that Dr. Earle M. Chapman had suggested to the American Medical Association that the health services in the states and counties and communities should be listed and publicized. The American Medical Association answered Dr. Chapman by saying that this was a matter known best, and perhaps only, by the communities. Dr. Conlin suggested that this was good positive action and could best be handled by the district societies through the members of their co-ordinating committees and the results channeled back to the Society Co-ordinating Committee, which is charged with the National Education Campaign of the American Medical Association. Dr. Conlin moved that the information be obtained in this manner. The motion was seconded. The discussion disclosed that this was a large job and would need much exploration by the co-ordinating Committee. Dr. Allen called for a vote, and the motion was passed.

The Secretary said that the next business would be the consideration of a report of the Committee on Finance that had to do with a recommendation of the Committee on Public Relations concerning an addition to the budget of Dr. Conlin's department and suggested that Dr. Conlin be heard before voting on the report. Dr. Allen asked Dr. Conlin to proceed.*

Dr. Conlin spoke as follows:

During the war years it was recommended separately by three different committees — the Committee on Legislation, the Committee on Public Relations and the Committee on Postgraduate Medical Education — that they have a full-time physician furnished to them to augment the work of each. There was the problem in postgraduate education because of the physicians returning from service. And there was the fact, which many had little realized, that our public relations, our impact on the mind of the community, was not what it should be. Other states were greatly expanding their programs, and we were apparently lagging behind.

In the matter of legislation, I need not say too much. You know there was a chiropractic bill in 1945 that passed both the House and the Senate in Massachusetts and was vetoed by the Governor. And a bill to prohibit animal experimentation came within one vote of passing in the Senate. The Committee of Seven very rapidly decided that it would be an individual. One of their comments was that it would be difficult to define the duty of such an individual and that much would depend upon the peculiar talents that he brought to the job.

As of July 1, 1947, I was honored by the Council in being designated, on recommendation of the Committee of Seven, to take over this position. My first reaction was that I wanted about two years to be bothered by nothing outside, that two years would be needed to take care of our own internal relations and organizations and that there was no sense in attempting to have public relations until the house was perfectly in order.

That meant that every one of our districts would be approached, and all their problems would be discussed and they would be assisted in bringing up to date their own organizations, their own activities in the field of public relations, that we would make the necessary investigations on fees and publicizing the work of the Committee on Ethics and Discipline, the so-called grievance committee. It is apparent to everyone, I think, that if a public-relations program is regarded as a whitewashing or a propaganda job, such an opinion is very gravely in error. There is no advantage whatsoever in attempting to take a program to the public to try to make the public think you are something that you are not. Needless to say, we did not get those two years. We started very promptly with organizing the Woman's Auxiliary to the Society, which I still regard as one of our major ventures. It is well organized in 14 districts, with some 1200 ladies now members. Three other districts have approved, and I think will very shortly organize. Springfield came in within a matter of weeks. They had over 200 women at a luncheon there the other day. And I think it is an extremely good thing.

We have established effective liaison with every one of our allied professional groups — biology teachers, dentists, pharmacists, nurses, chiropodists and optometrists; it is a long story to tell what the steps were, at what meetings we have appeared and what we have done. Interprofessional committees have been set up by the President in response to a demand that was frankly stimulated, a joint committee to meet the pharmacists — Dr. Frank N. Allan's report is on the agenda today.

There will shortly be another committee created to meet with the Massachusetts Funeral Directors, who are anxious to assist us with the work of obtaining autopsies. We have furnished almost innumerable organizations with speakers and assisted in making up programs. There is coming up, during the week of May 1, the annual meeting of the Massachusetts Dental Society, and on Thursday afternoon there will be a joint meeting of the medical and dental professions, with problems of both professions being jointly discussed. We have met with almost every category of the public. I think we can sum that all up by saying we were the first state to have a state-wide health conference sponsored and under the auspices of the Society, for which we appropriated $500 as a starter, and that has produced incalculable good results in bringing consumers and producers of medical care together.

The contacts that were made there and the programs for improving health in Massachusetts for the next five years have set definitely attainable goals. I think it is safe to say that in the first year between 25 and 50 per cent of the five-year program is either under way or realized. We have in the entire field of legislation, I think, handled every chance that was offered to us. There has been no adverse legislation passed. We have supported some good legislation — the local health units bill and a good deal more in Massachusetts. That is a time-consuming thing; it becomes one of the major projects of the Society. Some 2700 bills have to be screened, and in a detailed study, 300 of them are segregated as pertaining to medical practice indirectly or directly, and of the 300, about 10 per cent, or some 30, require some very close and careful study and attendance at all the hearings and so forth. We have improved relations tremendously with the allied health groups, so that there is an exchange of information. Their executive secretaries and their officers have given us fine co-operation. Various public groups have responded very well, once they found out that apart from talking we were really anxious to do things.

Various service groups have afforded hospitality to our speakers and have heard the message of good medicine in one way or another. This afternoon, at Boston Teachers College, the health educator of every school in the Boston area will be present, as well as a school administrative official, to be told a story on the part of the health education program that, in the announcing letter, is under the joint auspices of the Massachusetts Medical Society.

The Boston Tuberculosis Survey was not properly, I daresay, a problem of the Society, but we early co-operated with them because of the tremendous importance of getting 500,000 people in the metropolitan area with a notoriously high tuberculosis rate — it is beside the point that I was the general chairman of that, but at least it called for a lot of time and a lot of effort, and it was an effort well worth while; 550,000 people above the age of

*At the request of the Executive Committee, a digest of the remarks by Dr. Conlin and the Secretary was given to the Council.

fifteen were given x-ray examinations in a sixteen-week period.

We found that in a highly industrialized state we did not have an adequate industrial medical program and the people who were charged with that function have been transfused, and we have conducted several meetings on a statewide basis, with still another coming up. More and more physicians who do part-time industrial medicine realize now their responsibilities and are being given assistance in carrying those things out, and it has definitely had an effect on both labor and management, which certainly represents ideas translated over into action.

The same situation exists in school health, children being educated to health and in many instances being given very slipshod physical examinations; a section on school health has been set up within the Society, and that program is under way. Legislation is on the verge of being enacted that will permit better examinations at less frequent intervals and so forth, through a very lengthy category.

In talking at the colleges it is extremely important to get the point of view of good medicine before students. We have been at Amherst; we have been at Harvard University; we have been to Boston College; we have been to practically every department of Boston University, including the schools of Divinity, Liberal Arts and so forth. Every group of medical students in the School of Public Health has been talked to each year, and in recent years on the matter of organized medicine, its objectives, its goal and where doctors fit into the community. We have stimulated an intense desire on the part of medical students to have some organization, particularly here in Massachusetts, and also on a countrywide basis, that will get them away from the left-wing association of interns and medical students.

We have been doing business thus far with a hammer and a saw. The Committee on Public Relations recommended that I have a part-time assistant something over a year ago, and that was of tremendous help a couple of hours a day. But it has proved, under stress of current commitments, entirely inadequate. We have been handicapped from the point of the budget. If it was a matter of delivering a box of pamphlets or something, rather than sending them through the mail, or by Railway Express, because we could not afford it, because there were not enough funds available, we had to get a door-to-door truckman to come in and pick them up and probably spend more time on the arrangements because we had time and did not have funds to get the things delivered.

We have had the problem of book space and reprint space. We have had book transfer cases because they happened to come at 80 cents a box and we have stacked them one on top of the other, instead of building bookcases, because that was too expensive. Press releases have been hampered. They have not been sent out nearly as frequently as they should have been. We have not scratched the surface of telling our story, publicizing the work of the various committees and telling people what we have been doing.

We have communicated with the newspapers and radio stations. We are on relatively friendly basis with them, but that has got to be perfected on a statewide basis. We have got to meet every feature writer on every newspaper and every radio station manager, and establish definite liaison with them — all that and much more. And it calls for more money. And it calls, secondly, for personnel. A person is my immediate request. He is going to cost $4500 a year.

Some of you may have read in *Medical Economics* recently a survey of public relations through the various states. It was said that there should be a field secretary for every 1000 physicians in Massachusetts. That would be about 5 or 6 lay people actually out in the districts, meeting with groups, talking with them and handling press and radio and other relations.

In Massachusetts there are 6750 physicians whose net income, according to most recent information, is $8600 per year, a corporation something of the order of $60,000-000, And the public-relations programs of $60,000,000 corporations are quite a staggering thing. I am not saying that that has to be duplicated, but we have certainly got to start thinking the kind of thoughts that go with big business if our business is going to be good and is going to be properly represented.

It cannot be done without better office equipment. We need a news letter. One of our greatest problems now is keeping our people informed of what is actually going on at the moment. The mailing can run up to $400 and possibly even $500, and if one talks about six or eight issues a year, one is talking about rather a sizable expense. Things we regard as a rather small expense — such as clipping services from newspapers — can run as high as $40 or $50 in the course of a month. In addition, there are subscriptions to journals, membership in the Better Business Bureau, a $500 appropriation to the Woman's Auxiliary on a state basis, contributions to the National Society for Medical Research, which is carrying a good share of our responsibility for us on animal experimentation.

I repeat that what we have done so far has been quite largely accomplished with persons and quite largely with the hammer-and-saw technic. The Co-ordinating Committee has set aside for this year a budget of $500. And if we are talking about five years ahead and ten years ahead, and twenty-five years ahead from the point of view of Society Headquarters, and other phases of our program, one thing that should not be overlooked is the portion of our activities charged with maintaining the freedom of the profession one year from now and three years from now. It is that simple. And we are not going to tell that kind of story with a budget of $500. We were able over three days to get in touch with the Farm Bureau Federation, the American Legion, the Veterans of Foreign Wars, the Federation of Women's Clubs, the Bar Association and a lot of other people, and we were able to charge the American Medical Association Campaign out in Chicago with a good deal of the expense of printing and mailing, but we still are leaning too much on outside effort and we have not got the tools to do our own job.

Therefore, there comes a request for specific help in the form of personnel and the money to put the personnel to work.

Dr. Gallupe then spoke as follows:

In preparation for what Dr. Buck has to say, and in consideration of what has come about concerning additional sums of money for the Department of Public Relations, I want to give you the results of a survey that I made. As a result of that questionnaire, I found that 18 out of 38 state medical societies have grievance committees, and are contemplating having them. And 16 out of the 18 publicize the fact that they have them. They tell the prople in the state or the district that they have them and what they are for. Only 2 do not publicize the fact, but 4 out of the 7 that contemplate having grievance committees, contemplate also publicizing the fact. So that the recommendation of the House of Delegates has some effect. Immediately, state and district societies began to think about it.

Then I asked how much the annual dues were; the average dues were $32 per year, and ours are still $7 under the average. And that average is brought down a bit by states like Mississippi, where the dues are only $5. In Arizona, the dues are $50; in California they are $45; in Colorado they are $50; in the District of Columbia they are $40; in Florida they are $40; in Indiana they are $35; in Iowa they are $50; in New Hampshire they are $40; practically every cent of it for public relations — they had dues of $10 before.

In New Mexico the dues are $30; in North Carolina, $40; in North Dakota, $50; in Rhode Island, $40; in Utah, $50; in Vermont, $35; and in Wisconsin, $50. We have very little money out of your $25 to use for running expenses of the Society. Right off we pay $5 out to the Library, leaving $20. This year it is $3 out for the *Journal*, leaving $17, and we hope to make it more than $3 next year. But the Benevolent Fund is $1.50 out, bringing it down to $15.50; $8000 back to the district societies accounts for another $1.25, bringing it down to $14.25. So, instead of $25 for running expenses, we have only $14.25; out of all these high dues, most of the money

goes for public-relations efforts, and about the same ratio, perhaps, for running expenses.

But we have to know those figures and think about what the rest of the country is doing before we can tackle a problem such as Dr. Conlin's and the reason why his department needs some more money.

In every state that has a journal, the dues I have mentioned include the journal. But probably there is no state journal in the country that is as expensive to put out as ours is. And there certainly is no journal as good. Some of the state dues are quite high compared to ours, but over and above that, the individual doctor is taxed a lot more, because, as you know, Massachusetts is one of the very few states where the business of the society is done by the state society. In most states, the districts collect dues in addition to the dues they pay the state society, and the district does all the work of the society. Most district societies are rather autonomous. The Almeida County Medical Society, however, is perhaps far more important than the California State Medical Society, for it runs its own business and its own program, raises its own money and expends it. Now, in addition to all these dues, practically every county society in the country except those in Massachusetts has its own dues. The district-society dues in California run as high as $100, in addition to the $45 for state-society dues.

In this state, of course, district-society dues are very small. In fact, a great many of the districts have no dues at all. Worcester, I think, is high with $15; that is the high point, but in other states that would be considered low. Michigan, which is one outstanding example, has raised by assessment, over and above state-society dues, in two years for public relations $400,000. Now, think about it when you consider the Building Fund, the Reserve Fund, and the dues.

Dr. Buck presented the following report of the Committee on Finance to the Executive Committee:

The Committee on Finance met on April 5 to consider the matter of increasing the appropriation to be allocated in 1950 to the Director of Medical Information and Education. It is the opinion of our committee, as reiterated in our annual budget report, that a conservative policy is to be encouraged in respect to increasing the expenditures of the Society, and we are not in favor of permanently rearranging our financial structure in response to the plea that an emergency exists. In the realization, however, that there is at present a real emergency requiring some sacrifices on the part of all of us who believe that there are better ways of improving the public health than by Government prepayment of medical care, the Committee has voted (5 favorably, 1 opposed) to recommend the following:

That the Council rescind its action of February 1 allocating in the annual budget the sum of $8000 to be refunded to the district societies.

That the amount to be refunded to the district societies in 1950 be nothing.

That the $8000 that would have been refunded to the district societies be added to the appropriation already voted for the expenses of the Director of Medical Information and Education, making the appropriation $13,000 instead of $5000 as provided in the budget.

The Committee voted against the adoption of the recommendation B in the report of the Committee on Public Relations that all annual surplus monies be diverted from the Building Fund to the budget of the Director of Medical Information and Education.

The return to the district societies was an appropriation that was made at the recommendation of the Committee on Finance. That, of course, is just a guess and not binding. The actual amount, according to our by-laws, is to be determined after the close of the financial year, between the Committee on Finance and the Treasurer, provided there is a surplus left over to divide up. If there is no such surplus, there is nothing to divide up, but we tentatively set a figure in the budget and that was $8000. And that is what the Council agreed to appropriate. Now that $8000 has been appropriated, it cannot be used for any other purpose. Having rescinded our vote, we still have that money apparently floating in air. So that the second recommendation is that the amount to be refunded to the district societies in 1950 be nothing.

The third recommendation, which takes care of the $8000 hanging in the air, is that the $8000 that would have been refunded to the district societies be added to the appropriation already voted for the expenses of the Director of Medical Information and Education, making the appropriation $13,000 instead of $5000 as provided in the budget. Those three recommendations are necessary to make the $8000 available.

Dr. John Curley made a motion that all the recommendations of the Committee on Finance be approved. The motion was seconded. Dr. Kelly said that Suffolk councilors suggested that the money might be borrowed from the Reserve Fund. It was also suggested that a special assessment should be levied. Opinions were expressed against loans and assessments. Dr. Allen asked for a vote, and the motion was passed unanimously.

Dr. Allen presented the report of the Committee on Public Relations as printed. Dr. Fallon moved approval of the first recommendation. Dr. Curley seconded the motion. Dr. Hornor moved an amendment to the effect that Dr. Buck's second recommendation be substituted. The motion as amended was seconded, and it was so voted. It was moved and seconded and so voted to accept the report as amended.

The reports of the Committee on Tax-Supported Medical Care, the Committee on Legislation and the Subcommittee on National Legislation were accepted without discussion.

Dr. Allen presented the report of the Committee on Publications. It was moved and seconded to accept the report as printed. Dr. Garland pointed out that although there appeared to be a net loss of $15,000 in 1949, this was not a true case; the cost per subscription in 1949 was $5.97; it cost the *Journal* about $5000 to publish the list of applicants and the proceedings of the Council; retired and nonresident members get the *Journal* free; cost of production has gone from $240,000 in 1947 to $292,800 in 1949; 4600 medical students receive the *Journal* for $2.00 under the cost. Dr. Allen asked for a vote on the motion, and it was passed.

Dr. Allen presented the report of the Committee on Ethics and Discipline. It was moved and seconded to approve the report with all its recommendations. Dr. Fallon said Worcester district had already voted to have a grievance committee. The Secretary said it was the opinion of the Committee on Ethics and Discipline that it would be unwise to have district grievance committees. Dr. Curley suggested that the complaints about fees might well be cared for by the professional service committees under Blue Shield. Dr. Hayden said that these committees could be used to funnel information to the Committee on Ethics and Discipline and that people should know that there is a local committee to whom they could go. Dr. Allen asked for a vote on the motion, and it was passed. Dr. Curley then moved that each district society have a professional service committee to handle complaints about fees whether Blue Shield or not. The motion was seconded. Dr. Merriam said this would be a big job in a large district. Dr. Curley moved that the motion be amended so that each large community would be represented. The motion was seconded, and it was so voted. The original motion as amended was passed. It was moved and seconded to accept the report as a whole, and so voted.

The President presented the report of the Committee on Medical Education. A motion was made to approve it with its recommendations. The motion was seconded and carried.

The Secretary presented the report of the Committee on Membership with its recommendations. The report was approved as a whole without discussion.

The President presented the reports of the Committee on Public Health and the Committee on Pilot Clinics, which were approved.

The Secretary presented the report of the Committee on Finance as printed in the *Circular of Advance Information* and moved its acceptance with the recommendations concerning additions to the budget. Dr. Kelly moved approval of the report as a whole. The motion was seconded, and it was so voted.

The report of the committees on Industrial Health and Benevolence were approved without discussion.

The President presented the report of the Committee on Council Rules and By-laws with its recommendations. Dr. Curley moved acceptance. The motion was seconded. Dr. Hayden made a motion to amend by striking out the word "medical" preceding "director" in the second amendment recommended. The motion was seconded and carried. The original motion as amended was so voted.

The reports of the committees on Cancer, Hospital and Professional Relations, Maternal Welfare and Postgraduate Medical Education were all approved without discussion.

Dr. Soutter presented the report of the Committees on Red Cross Blood Bank and Regional Blood Center. He asked that the two committees be joined in one name since they met together. It was moved and seconded that the committee name be changed to the Committee for Supervision of the Red Cross Blood Program. The motion was carried. Dr. Soutter explained the reasons for the first recommendation, regarding withholding approval of the American Association of Blood Banks as follows:

> The American Association of Blood Banks was founded in Texas in 1947 to fight the Red Cross Program. It made money on the collection and distribution of blood, and some of its representatives were on a commission basis. It had tried to persuade the House of Delegates of the American Medical Association to disapprove the Red Cross blood program. Under pressure from the American Association of Blood Banks, the State Medical Association of Texas had voted to allow no national agency to handle collection of blood in Texas. The Massachusetts Medical Society is asked to pass a similar resolution. Such a move would be bad for the Commonwealth, where, since March, 1948, the Red Cross has distributed 47,000 pints of blood, 10,000 pints for research on blood substitutes, 10,000 double units of surplus plasma and 62,000 vials of gamma globulin. Loss of this service to a money-making organization could create an unfavorable impression on the public.

Dr. Soutter, in answer to questions, explained that the Red Cross did not desire to exclude other worthy programs, but that the American Association of Blood Banks desired to exclude the Red Cross. It was then moved, seconded and voted to approve the recommendation and the report as a whole. Dr. Soutter agreed to furnish the delegates with a concise statement for use at San Francisco.

The President presented the report of the Committee on Diabetes, which was approved without discussion.

The President presented the report of the Committee on Fees with its recommendations. The report as a whole was approved without discussion. Dr. C. J. E. Kickham said the councilors of Norfolk wanted the Committee on Fees to continue. Dr. Allen agreed.

The reports of the Treasurer, the Committee on Redistricting, and the Committee to Meet with the Massachusetts State Pharmaceutical Association were approved as printed and without discussion.

The meeting adjourned at 5:10 p.m.

H. Quimby Gallupe, *Secretary*

APPENDIX NO. 3

Letter Concerning Appointment of Commissioner of Mental Health

May 31, 1950

Governor Paul A. Dever
State House
Boston, Massachusetts

Your Excellency:

The fellows of the Massachusetts Medical Society note with regret the resignation of Dr. Clifton T. Perkins as Commissioner of the Department of Mental Health. Because of the great importance of mental health to the physicians and people of this Commonwealth, we are most interested in the appointment of a suitable successor.

> "The Commissioner of the Department of Mental Health is charged with the responsibility for all matters affecting the mental health of the citizens of the Commonwealth. The *development* and *enactment* of that program is of the greatest importance to the health needs of all. We know, therefore, that you will make every effort to find the psychiatrist, who, by his training and his experience, is best qualified to take charge of this very important and responsible position, to be the successor to Dr. Perkins.

Dr. Clifton T. Perkins has ably filled his position and has done much to raise the standards of psychiatric care in Massachusetts. He has shown great interest in treatment and research and in the development of better training programs for nurses and for physicians. We believe it is important that the program of improvement of state hospitals he initiated, be continued.

As you know, the Department of Mental Health, under the leadership of the Commissioner, is responsible for the management of state hospitals. It is, therefore, important that the high quality of medical care, practiced in the Massachusetts state hospitals for many years, be preserved and that the program of therapy be advanced in the years ahead.

Medical education in this State, in so far as mental health and mental disorders are concerned, is carried out in large part in our State mental hospitals. Our young physicians must be properly trained in hospitals that reflect good medical practice if the lives and happiness of our citizens are to be adequately safeguarded.

Research activities under the sponsorship of the Department of Mental Health have great importance also, for out of the answered questions come better ways of treating the sick and of shortening the period of misfortune.

Massachusetts has had a model law in Chapter 123 and in Chapter 19 of the General Laws. Section 1 of Chapter 19 establishes the qualifications for a Commissioner. This is an excellent law and should do much to ensure the proper care and treatment of the mentally ill. It is particularly important that the provisions this law makes for extending to the psychiatrist, who is to serve as Commissioner, the facilities, freedom of action and position, which are so essential for successful implementation of his plans, be preserved.

The Massachusetts Medical Society knows that every action will be taken to secure a Commissioner for the Department of Mental Health who meets the qualifications established by law and who will possess the vision and experience to be able to carry out the program of mental health to an even more complete realization than has been possible to date."

Sincerely yours,

Leland S. McKittrick, M.D., *President*
H. Quimby Gallupe, M.D., *Secretary*

APPENDIX NO. 4

Report of the Committee on Public Relations

A meeting of the Committee was held at the Harvard Club of Boston at 6:00 p.m., March 1, 1950. President Arthur W. Allen was in the chair. There were present 13 of the 18 representatives of the district societies. Dr. Leland S. McKittrick, president-elect of the Massachusetts Medical Society, Dr. H. Quimby Gallupe, secretary, Dr. Eliot Hubbard, treasurer, and Dr. John F. Conlin, Director of Medical Information and Education, were also present.

Dr. Gallupe informed the Committee of the recent meeting of the Committee of fifty-three of the American Medical Association, stating that he was very much impressed with the work that Whitaker and Baxter were doing with reference to the educational program of the Association. There were, however, two very important criticisms of the medical profession still remaining — namely, that at times physicians' fees are excessive and that there is as yet no fixed plan on the part of physicians to provide medical care for nights, holidays and week ends.

Dr. Gallupe further called the attention of the Committee members to the recent report of Charles S. Nelson, executive secretary of the Ohio State Medical Society, of interesting facts concerning the last national election. In Summit County, one of Ohio's industrial areas, including the city of Akron, the county board of elections disclosed the following information:

18% of the physicians of the county did not vote in the 1948 election — 13% of them were not even registered and therefore not eligible to vote.

22% of the wives of physicians did not vote — 16% of them were not registered.

10% of the members of the Rotary Club did not vote — 3% were not registered.

The tally on Kiwanis Club members was about the same. 18% of the druggists did not vote — 15% were not registered.

11% of the teachers did not vote — 6% were not registered.

32% of the bank employees, including executives, did not vote — 26% were not registered.

33% of the ministers did not vote — 26% were not registered.

34% of the retail grocers did not vote — 20% were not registered.

21% of the members of the Chamber of Commerce did not vote — 15% were not registered.

Mr. Nelson concluded:

Elections are still won by votes, strange as that may seem to some people.

And, the politician still has a warm spot in his heart for groups which vote and produce votes. If you doubt that, just ask one.

Dr. Gallupe further discussed the question of the budget of the Society, emphasizing the fact that Massachusetts spent only about $5000 excluding the salary paid Dr. Conlin on public-relations work. Some states such as Michigan spent as much as $400,000 with reference to public relations alone. He emphasized the work done by Dr. Conlin as Director of Medical Information and Education, the importance of the work, the greatly increased amount of work in prospect and consequently the need of a larger budget to carry on the long-range program that must be executed in the future.

Dr. Conlin further elaborated on the future program of his office with reference to legislation, health, public relations, speaking programs, press and radio work and so forth. So many are the demands made upon his time that he found it impossible to keep his many outside appointments and still maintain an efficient office. Therefore, it was necessary that he have some assistance if his future program was to be carried on.

President Allen informed the Committee that more assistance for Dr. Conlin meant an increase in his budget. To increase this budget would mean either increased dues, a special assessment, or some other method of meeting this financial demand.

Dr. Eliot Hubbard, treasurer, then discussed with the members of the Committee the present financial status of the Society, stating that the surplus for 1949 was somewhere in the vicinity of $14,000. This sum by vote of the Council must be added to the Building Fund. The surplus for 1950, which at the present time was calculated to be about $4000, must also be added to the Building Fund.

Dr. Nicholas S. Scarcello, Worcester District, called the Committee's attention to the fact that the Society reimbursed each district with a certain percentage of the dues paid by the respective members before March 1 of each year. This amounted to somewhat over $1 per member, or approximately $8000 for the year 1950, according to Dr. Hubbard.

As a result of all this discussion with reference to the increased work of Dr. Conlin's office, the necessary increase in the budget alloted to him and the consequent necessity of finding finances to cover this increased budget, the following resolutions to be submitted to the Council were unanimously approved by the members of the Public Relations Committee.

That all monies which are being used to reimburse the District Societies be diverted to the budget of the Director of Medical Information and Education.

That all annual surplus monies be diverted from the Building Fund to the budget of the Director of Medical Information and Education.*

There was some discussion by the members of the Committee with reference to the creation of a War Memorial Fund for the purpose of educating the children of the fellows of the Massachusetts Medical Society killed in World War II. There were reported 21 fellows who died in this war.

*This recommendation was not approved by the Council.

President Allen appointed a subcommittee consisting of: Dr. Nicholas S. Scarcello, Worcester District, Dr. Ralph H. Wells, Middlesex South District, and Dr. Samuel A. Dibbins, Middlesex North District.

This Committee was to study this question and submit a report to the Committee on Public Relations.

The Committee awarded the "Massachusetts Medical Society Citation for Outstanding Contributions in Medical Progress" to Mr. Thomas Costello, president of the Lowell Sun Publishing Company. Under Mr. Costello's direction there were published in the *Lowell Sun* between January 16, 1946, and October 17, 1949, at least 18 stirring editorials, appropriately accentuated with cartoons, against socialized medicine. Again, during the months in which the Nolen-Miles Bill on vivisection was before the Massachusetts Legislature, Mr. Costello was instrumental in presenting in his newspaper the profession's point of view concerning vivisection.

There was some discussion about the American Medical Association program of establishing grievance committees in the various district societies. It was the general consensus of the members of the Committee that the Committee on Ethics and Discipline, as it has been established by the Massachusetts Medical Society, serves satisfactorily as a grievance committee for the entire state. It was the opinion of the members that an ethical publicization of the existence of this committee might be a good public-relations project inasmuch as it informs the public that there is in existence such a committee to which it may address its complaints.

The question of the American Medical Association dues of $25.00 was discussed by the members of the Committee, particularly whether or not it was desirable that members of the Society be members of the American Medical Association to maintain their membership in the Society. No action was proposed after this discussion.

The meeting adjourned at 10:30 p.m.

HAROLD R. KURTH, M.D., *Secretary*

APPENDIX NO. 5

REPORT OF THE COMMITTEE ON TAX-SUPPORTED MEDICAL CARE

This report is informational.

The Committee on Tax-Supported Medical Care has not yet received the information that it desires from the district medical societies and hopes to have this information before the October meeting of the Council, when it will make a report on the problems submitted to the Committee.

WILLIAM W. BABSON, M.D.
DONALD HIGHT, M.D.
FRANCIS P. MCCARTHY, M.D.
ALBERT A. HORNOR, M.D., *Chairman*

APPENDIX NO. 6

REPORT OF THE COMMITTEE ON LEGISLATION

This report is informational.

At the time of writing, there are no major legislative problems confronting the Committee in the field of state medical legislation.

In the national field, however, the situation is more complex. These bills are being reported separately by the Subcommittee on National Legislation.

With the opening of the 1950 session of the Massachusetts Legislature in January, the Committee screened 300 bills having some bearing on medicine. Of these, approximately 50 were found to be of major interest and importance from a medical standpoint.

The antivivisection bills were again turned over to Dr. Conlin, and at the time of this writing, all have been defeated.

Opinions from members of various committees within the Society were solicited on bills relating to specialties or subspecialties. These opinions were most graciously given and proved invaluable to the Committee.

H.R. 688, a resolution to memorialize Congress to oppose compulsory health insurance, received a favorable committee vote and successfully passed both houses. Commendation should be made to the Woman's Auxiliary for the effective and successful efforts in obtaining the passage of this resolution.

The chiropractor bill is now before the House, but the Committee has reason to believe that the General Court will accept the Committee's report and act unfavorably.

There are a number of bills still in committees, on which action will probably have been taken by the time the Council meets. A supplementary report will be made at that time.

JOHN B. BUTTS, M.D., *Chairman*

APPENDIX NO. 7

REPORT OF THE SUBCOMMITTEE ON NATIONAL LEGISLATION

This report is informational.

Since its last previous report to the Council, the Subcommittee on National Legislation has expressed to Senators Lodge and Saltonstall its attitude regarding certain aspects of H.R. 6000, which has been under consideration by the Senate Committee on Finance for some time. The same material was also sent to the Chairman of the Committee on Finance, Senator John McClellan. The letter is as follows:

January 24, 1950

Senator Henry Cabot Lodge
Senate Office Building
Washington, D. C.

Dear Senator Lodge:

The medical aspects of H.R. 6000 as contained in the attached summary were examined by the Committee on Medical Economics, the Executive Committee of the Committee on Legislation and the Subcommittee on National Legislation of The Massachusetts Medical Society and the following action taken:

1. Approved.
2. Approved.
3. Approved.
4. Disapproved. In certain instances blindness can only be determined through a complete examination and evaluation of the patient as a whole. Therefore, the Committees feel that examination to determine blindness should be made only by physicians skilled in the diseases of the eye.
5. Disapproved. The Committees are in agreement with the views on permanent total disability insurance expressed by the Minority on Pages 164 through 166 of House Report No. 1300, 81st Congress, First Session. They also are in agreement with the views expressed in "Memorandum of Dissent by Two Members of the Advisory Council on Social Security to the Senate Committee on Finance," beginning on Page 184 of House Report No. 1300.

Respectfully,

CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

SUMMARY OF MEDICAL ASPECTS OF H. R. 6000

There is before the Congress H.R. 6000, the stated objectives of which are: "To extend and improve the Federal Old-Age and Survivors' Insurance System, to amend the public assistance and child welfare provisions of the Social Security Act, and for other purposes."

This bill introduces into the Federal Social Security program several concepts that have a direct bearing upon medical care. These are:

1. Federal funds under old-age assistance may be used to match payments directly to medical practitioners and other suppliers of medical services in behalf of needy aged persons, which, when added to any money paid to the recipient, does not exceed a monthly amount of $50. Under the existing law, the federal Government does not participate in the cost of medical care for recipients unless payment for such care is made directly to the recipient.
2. The federal Government would share in the cost of payments to old-age assistance recipients living in public medical institutions other than those for mental disease and tuberculosis. Under existing law, the federal Government participates in the cost of assistance payments to persons residing in private, but not in public institutions.
3. It would provide as a requirement for a state plan that, if the public assistance programs in a state include assistance to persons in public or private institutions, the state plan must also provide for the establishment or designation of a state authority or authorities responsible for establishing and maintaining standards for such institutions.
4. It would provide as a requirement for a state plan that, in determining whether a person is blind, there shall be an examination by a physician skilled in the diseases of the eye or by an optometrist. Existing law does not indicate how blindness is to be determined.
5. It would provide for a system of permanent and total disability insurance to cover all persons included under old-age and survivors' insurance as well as those entitled to benefits under public assistance.

Assistance payments would be available only to those needy disabled who either cannot qualify for insurance payments or who need supplementary aid.

Insurance payments would be available only to those covered wage earners and self-employed persons who have been regular and recent members of the labor force and who can no longer continue gainful work.

An insured worker, to qualify for permanent and total disability benefits, must be stricken with an illness, injury or other physical or mental impairment that makes it impossible for him to continue any substantial gainful activity. It would not be sufficient that he be disabled only for his customary work; he must be disabled for all types of work, and the impairment must be permanent. An insured worker would also be disabled, by definition, if he is blind within the meaning of the term as used in the bill.

Benefits would be paid to qualified disabled workers for the month following an initial waiting period of six consecutive calendar months of total disability.

Benefits for dependents of disabled beneficiaries would not be provided because of the added costs to the program.

A limited number of professional people would be required on the staff of the Bureau of Old-Age and Survivors' Insurance to make determinations of disability.

ELMER S. BAGNALL, M.D.
DAVID L. BELDING, M.D.
VLADO A. GETTING, M.D.
AUGUSTUS THORNDIKE, M.D.
WILLIAM H. SWEET, M.D.
CHARLES G. HAYDEN, M.D., *Chairman*

APPENDIX NO. 8

REPORT OF THE COMMITTEE ON PUBLICATIONS

This report is informational.

In presenting this report on the *New England Journal of Medicine* for the year 1949, we should like to quote a portion of the report of the Editor to the Committee:

During the year 1949 there has been a continued awareness of the twofold function that the *Journal* serves: as the official organ of the Massachusetts Medical Society, and as a scientific and literary journal of international prominence.

In serving the first function a special effort has been made to bring to the attention of the fellows matters of importance to the Society, using both the Massachusetts

Medical Society section and the editorial columns. (In this connection the Editor has attended many committee meetings in order to keep himself as fully informed as possible of the business of the Society.)

In serving the second function the concern of the staff has been to maintain a high grade of quality of original articles, of reports of progress and of editorials. The Case Records of the Massachusetts General Hospital speak for themselves; they are of uniformly high caliber and constitute one of the important features of the *Journal*. Reports of medical progress are carefully planned a year or more ahead of publication, in consultation with the Editorial Board. A series of articles on fifty years of progress in various lines is underway for 1951. This will consist of two divisions; one on medicine as a science, and the other on medicine as a social instrument.

The number of editorials was increased two years ago to three and frequently four per issue.

In controversial matters the *Journal* commonly has supported the Massachusetts Medical Society and the American Medical Association without sacrificing editorial independence. Its pages have been open to the temperate presentation of both sides of any question. The *Journal* repeatedly has been commended for publishing both sides of controversies.

For a year and a half the *Journal* has been releasing to the Boston press and the wire services, as of the day of or the day following publication, abstracts of original articles and proofs of editorials that seem to be of public interest. These have been widely used. In this way, not only are public relations served and a small contribution made to the medical education of the public, but a greater degree of accuracy in the interpretation of papers is assured.

In 1949, 476 manuscripts were received by the *Journal*, of which 223, or 47 per cent, were accepted. In 1948, 352 manuscripts were received, of which 170, or 48 per cent, were accepted. Manuscripts are considered with a view to serving particularly general practitioners and medical students, who constitute the predominating groups among the subscribers. The papers chosen, therefore, cover a wide range of subjects and are selected as far as possible for their practical usefulness. Because of the *Journal's* wide distribution and the relatively short delay between the acceptance of a paper and its publication, there is among these each year a number of papers reporting the results of more or less important original work. The papers are all reviewed by the Editor and one or more readers, and finally discussed by the full Editorial Board before acceptance or rejection. Our *Journal* is greatly indebted to these men for the conscientious and faithful manner in which they accept these responsibilities and attend the monthly meetings.

The care with which the articles are scrutinized may be appreciated when one considers that the entire text is edited and all references corroborated by Mr. O'Leary, then read again by the Editor, and given a final check by Miss Davies. Proofs are read by Miss Davies, Mr. O'Leary and the author and are revised, checked and reread before the forms are closed. By this method, mistakes are reduced to a minimum. The *Journal* has been praised as a model of good workmanship.

The Society can be proud of its *Journal* and of the skillful management of the Editor. Dr. Garland is very modest as to his share of the credit but we all know how important a factor his contribution is to the excellence of your *Journal*. Quoting again from the Editor's report to the Committee:

> At this point I should like to put special emphasis on the services to the *Journal* of Miss Davies and Mr. O'Leary, and my personal appreciation of the skill and devotion that they bring to their tasks. By no other means could the expanding work of the *Journal* have been kept in hand in recent years, without an increase in staff. Appreciation is also due to the force of office workers that Miss Davies has trained so well, each for her particular assignments.

The circulation of the *Journal* has continued to expand. The peak was reached in the last issue, on December 29, 1949 — of 25,815 copies — more than four times the number twelve years ago. A breakdown of this figure and a comparison of the last few years is as follows:

	1946	1947	1948	1949
Regular subscribers	12,074	14,375	14,266	14,580
Student subscribers	3,302	4,081	3,725	4,180
Massachusetts Medical Society	5,380	5,770	5,942	6,232
New Hampshire Medical Society:				
"once a month"	257	251	292	286
"regular"	174	219	223	206
Exchanges	155	172	193	191
Complimentary	56	58	59	67
Advertisers	72	75	70	73
Totals	21,470	25,001	24,770	25,815

These figures show a consistent trend, with the greatest increase of voluntary subscribers coming in the student group. This trend seems to be well worth cultivating, especially in view of the fact that in 1949 over 900 student subscribers changed to regular subscription at the full rate.

The most difficult problem facing the *Journal* has been that of finances. This is due to the fact that costs have risen at a greater rate than revenue, as can be seen by the abstract of the Auditor's Report below:

ABSTRACT OF AUDITOR'S REPORT

	1947	1948	1949
Revenue			
Advertising	$117,804.23	$144,480.86	$141,194.23
Engraving	607.69	595.70	559.73
Reprints	10,456.36	11,882.18	16,020.32
Subscriptions (other than MMS)	106,916.22	107,264.57	116,111.57
Miscellaneous	3,762.43	2,878.57	3,881.35
Totals	$239,548.93	$267,101.88	$277,767.20
Expenses:			
Publication of *Journal*	$165,062.16	$183,994.83	$203,757.75
Publication of reprints	10,208.04	12,282.46	16,275.37
Office and other salaries	40,900.03	40,547.03	42,307.22
Commissions, fees, etc.	13,677.34	16,828.42	17,927.36
Office and sundry expense	7,078.19	8,865.66	8,668.46
Pension fund	3,684.78	3,491.10	3,459.13
Social Security taxes	—	3,008.56	477.10
Totals	$240,630.54	$269,018.05	$292,872.39
Net Loss or Profit to M.M.S.	$1,081.61 (loss)	$1,916.18 (loss)	$15,105.19 (loss)

The actual operating loss for 1949 was $5,105.19. (In the Auditor's Report no credit is recorded of the $10,000 received from the Society). The cost of publishing the *Journal* is $5.97 per subscription. The paid subscriptions — regular, student and New Hampshire — average $6.16, so that there is a slight profit. The deficit occurs because of the loss on subscriptions to members of the Massachusetts Medical Society. The subscriptions going to the Massachusetts Medical Society cost the *Journal* $35,628, and the actual cost of stock and printing of the proceedings and lists of candidates was $4,580 — a total of $40,208. This expense was partly offset by the appropriation of $10,000 from the Society.

The accounts of the *Journal* have been audited by the firm of Hartshorn and Walter, and their report is in the hands of the Treasurer of the Society.

JAMES P. O'HARE, M.D.
CONRAD WESSELHOEFT, M.D.
OLIVER COPE, M.D.
JOHN FALLON, M.D.
RICHARD M. SMITH, M.D., *Chairman*

APPENDIX NO. 9

REPORT OF THE COMMITTEE ON ETHICS AND DISCIPLINE

The work of the Committee on Ethics and Discipline has been of the usual nature during the past year. Numerous complaints have been received from laymen, from fellow against fellow, and many about ethical conduct.

Inquiries concerning ethical conduct have been varied, ranging from the question of personal relation between members up to the question of proper advertising. (It has been pleasing to have had several inquiries concerning ethical conduct from men outside the Society who hope to become members in the future).

These inquiries have been answered by the Chairman subject to the approval of the Committee. All the complaints of the laymen against members have been thoroughly investigated and in each case the doctor was exonerated of any blame because of the animus expressed by the complainant.

Only one complaint has been received from a layman concerning overcharging by a member. This case is still under investigation.

A number of cases of complaints of doctors against doctors have been very thoroughly investigated and settled by the Committee. All these cases were placed on file.

One case of complaint from a druggist against a physician of unethical conduct was found to be justified. The doctor appeared before the Committee, acknowledged his fault, and immediately offered an apology to the druggist. This matter is considered closed.

One case in which a layman threatened suit against certain members of the Society was referred to the Committee on Medical Defense.

On November 23, 1949, Dr. Lewis Pilcher of the Committee on Membership, appeared before the Committee on Ethics and Discipline with two applications.

The first was for reinstatement of a physician who had been deprived of his membership by the Committee on Ethics and Discipline and had suffered two previous refusals. The Committee on Ethics and Discipline voted to withdraw its refusal to his reinstatement.

The second concerned the admittance of a physician previously convicted of a capital crime who had served a term in jail. One member of the Committee on Ethics and Discipline was acquainted with the applicant and his qualifications and offered to investigate further and report his findings to the Committee on Membership. The matter will be further discussed at our meeting on March 22.

Three cases of complaint were held in abeyance owing to the inability to obtain from the complainant satisfactory evidence of the truth of his statements. The complainant was given an opportunity to provide such evidence.

On January 18, 1950, Dr. John F. Conlin appeared before the Committee on Ethics and Discipline and spoke of publicity concerning grievances of the members of the Massachusetts Medical Society in line with the Colorado, Almeida County and Indiana grievance committees. The American Medical Association at its December meeting approved these plans and has reported the formation of such committees in at least 18 states.

Dr. Conlin asked the opinion of the Committee on Ethics and Discipline on the advisability of establishing and publicizing such a committee. The Committee voted to take the matter under advisement and report at the March meeting.

On March 22nd the Committee recommended that there be only one grievance committee on the state level and that its name remain the Committee on Ethics and Discipline.* The Committee also recommended that the public and profession be made aware of the presence and activities of this committee. The Committee recommended that the publicity be left to the discretion of the Director of Medical Information and Education, Dr. John F. Conlin.

In June, 1949, the American Medical Association at its annual meeting in Atlantic City proposed and accepted new *Principles of Medical Ethics*. This code has been incorporated in the new by-laws of the Massachusetts Medical Society for our governing. The essence of the code is found in the last paragraph under "Conclusion":

> These principles of medical ethics have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community. The life of the physician, if he is capable, honest, decent, courteous, vigilant and a follower of the Golden Rule, will be in itself the best exemplification of ethical principles.

The observance of this paragraph by every member of the Massachusetts Medical Society would lessen the work of the Committee on Ethics and Discipline.

WILLIAM J. BRICKLEY, M.D.
ARCHIBALD R. GARDNER, M.D.
ALLEN G. RICE, M.D.
JAMES H. TOWNSEND, M.D.
RALPH R. STRATTON, M.D., *Chairman*

*Recommendation amended by insertion of the words "and that" after "committee."

APPENDIX NO. 10

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

During the year 1949, the Massachusetts Medical Society was presented with the sum of $500 by an anonymous donor to establish a graduation gift fund for the purposes of "annually giving a prize of approximately $25 value along with a certificate stating the date and occasion of the gift from the Massachusetts Medical Society to each of three outstanding students. The selection of the prizes and the students is to be made by the Committee on Medical Education after consultation with the deans of the Harvard, Tufts and Boston University medical schools respectively. The gifts are to begin in 1950, and the principal of the fund to be used for this purpose until exhausted. The certificate to express the sentiment that the gift is in appreciation of "Diligent work in the Medical School by one who best exemplifies those intangible qualities which serve to designate him as a good physician."

The Committee has consulted with the deans of Harvard, Tufts, and Boston University medical schools respectively, and they have selected the prizes and the certificate. They nominate the following students for the awards: Mr. Leonard W. Cronkhite, Jr. (Harvard), Mr. Niles Lee Perkins, Jr. (Tufts), and Mr. Joseph Franklin (Boston University).

The Committee has discussed certain topics that are important to physicians and medical students — namely, medical-society organization, medical ethics and malpractice and animal experimentation. It was the sense of the discussion that it would be desirable for the Society to sponsor one or more lectures for medical students on these topics. The lectures could be given jointly to students from the three Boston medical schools. The purpose of these lectures would be to inform the students of the problems concerned with these topics.

The Committee has been requested to call the attention of the Society to the needs of the medical libraries throughout Europe and Asia. The Co-operative for American Remittances to Europe, Inc., has addressed a letter to the Society inquiring whether the State membership would "accept the challenge of contributing funds sufficient to supply each of a selected number of medical schools abroad with $1000 worth of the latest American medical books and literature." After discussion it was decided to inform the members of the Society of the worthiness of this enterprise and to insert a notice in the *Journal* to this effect.

The following recommendations are made:

That the Council and officers of the Society express their great appreciation to the anonymous donor of the Graduation Gift Fund for his interest in the Society and in the furtherance of scholarship among medical students.

That the Council approve of the nominations for the prizes for 1950.

That the Council approve of the proposal that the Society agree to sponsor one or more lectures for medical students on topics of medical ethics, malpractice, animal experimentation and Medical Society organization and objectives; to inform the deans of the three medical schools that the Society is prepared to sponsor such lectures for medical students.

That the Council approve of the worthiness of the cause of the "Co-operative for American Remittances to Europe, Inc." and that a statement to this effect be published in the *New England Journal of Medicine*.

OLIVER COPE, M.D.
JAMES M. FAULKNER, M.D.
ISAAC R. JANKELSON, M.D.
ROBERT T. MONROE, M.D.
CHESTER S. KEEFER, M.D., *Chairman*

APPENDIX NO. 11

REPORT OF THE COMMITTEE ON MEMBERSHIP

The following three recommendations were made and passed unanimously by the Committee on Membership at its meeting on March 8, 1950:

That the by-laws be amended to add to Section 3, Chapter 3, the following paragraph: "A fellow may not be transferred from one district society to another until

all district society assessments in the original district society have been paid in full up to, but not including, the year of transfer."

That the by-laws be amended by the addition to Section 1, of the following paragraph: "A fellow may not be transferred to nonresident fellowship until all regular dues have been paid in full up to, but not including, the year of transfer."

That district secretaries be instructed to furnish each applicant for fellowship with a copy of the *Digest, By-laws, Code of Ethics, Publicity Code and Medical Defense Act of the Society*, and of the *Principles of Medical Ethics* of the American Medical Association, and that the district boards of censors be requested to include in their examinations of applicants several questions concerning ethics to satisfy themselves that the applicants have familiarized themselves with the *Code of Ethics* of the Massachusetts Medical Society and the *Principles of Medical Ethics* of the American Medical Association. The Committee on Membership believes that under the present system by which the district secretaries, in accordance with the by-laws, Chapter 5, Section 3, distribute the *Code of Ethics* only to fellows after they have been accepted into the Society a majority of the fellows probably do not familiarize themselves with the conditions of the *Code of Ethics*, whereas if the code was given to the applicants for fellowship when they first made application, with the understanding that they were to be examined on the code later, they would all familiarize themselves with the code and any who did not understand the ethical principles involved, or did not subscribe to them, could be discovered before they were admitted to membership.

A great deal of stress has always been placed by the Committee on the ethical background of applicants for fellowship, particularly applicants from unapproved schools, and it seems only logical that steps should be taken to ensure knowledge of the official phases of ethics by such applicants before they are formally admitted to fellowship in the Society.

WILLIAM A. R. CHAPIN, M.D.
HENRY F. HOWE, M.D.
DONALD MUNRO, M.D.
SAMUEL N. VOSE, M.D.
LEWIS S. PILCHER, M.D., *Chairman*

APPENDIX NO. 12

REPORT OF THE COMMITTEE ON PUBLIC HEALTH

A meeting of the Committee was held in conjunction with the Committee on Health Protection Clinics, at 3:30 p.m. on March 8, 1950, in Sprague Hall, 8 The Fenway. The entire membership was present.

The Committee on Public Health concurred with the Committee on Pilot Clinics in its approval of Dr. Ryder's report of progress and the recommendation that a committee on pilot clinics be continued until the initial pilot clinic has fulfilled its mission and the results are evaluated.

Dr. Nicholas Fiumara, director of the Division of Venereal Diseases of the Department of Public Health, appeared before the Committee to request its approval of a plan that, in his opinion, will improve the reporting of patients with venereal diseases and in particular syphilis.

This plan provides that the State Laboratory will send to the Division of Venereal Diseases of the Department of Public Health, duplicate copies of all positive blood tests for syphilis. These duplicate copies will be kept on file for sixty days. At that time morbidity records will be checked to determine whether or not the physician has reported the patient as having syphilis. If no report has been received, a letter similar to that reproduced below will be written to the physician asking whether or not a diagnosis was established. A morbidity report card will be enclosed for his convenience, in the event that a diagnosis has been made and the case not reported.

A motion was made and carried in favor of a procedure as outlined by Dr. Fiumara.

JOHN J. POUTAS, M.D., *Secretary*

March 8, 1950

Dr. John Doe
489 Main Street
Boston, Massachusetts

Dear Dr. Doe:

Your co-operation is requested in reporting patients with venereal diseases.

On .....(date).....the State Wassermann

Laboratory sent you a report of a positive blood test for your patient .....(name).....of .....(no.) (street)

.....(city or town).....(state)

If a diagnosis of syphilis has been established on this patient will you please report it on the enclosed form. If you have previously reported this patient, please complete the enclosed form and make it "duplicate," giving the date of the original report.

If you consider this patient not infected please so state in the appropriate space in this letter and return in the enclosed, franked envelope.

Very truly yours,
NICHOLAS J. FIUMARA, M.D., M.P.H.
Director
Division of Venereal Diseases

The above named individual, in my opinion, is not infected with a venereal disease.

.....(date).....(Signed)....., M.D.

APPENDIX NO. 13

REPORT OF THE COMMITTEE ON PILOT CLINICS

This report is informational.

The Subcommittee on Pilot Clinics, since its last report to the Council, held a joint meeting with the Committee on Public Health on March 8, 1950. The clinic administrator presented a progress report indicating that, to date, 1000 persons had been screened and that preliminary statistical analysis is available for the first 380 of these; 210 of these 380 were referred to their family physicians for findings suggestive of hypertension, heart disease, cancer, amnesia, diabetes, syphilis, pelvic disorders, obesity, underweight, vision and hearing defects and so forth.

Although no conclusion can be drawn from such preliminary data, the Subcommittee reports progress, and will submit a final, detailed report after the completion of the pilot clinic. Consideration was given to the financial problems of this and future screening clinics, and a change was approved relative to the referral procedures of vision and hearing defects and obesity problems.

It was the sense of the group that the Subcommittee on Pilot Clinics be continued until such time as a final report could be made to the Council on completion of the study.

BROOKS RYDER, M.D.
SIDNEY COBB, M.D.
GEORGE DUNLOP, M.D.
ALFRED L. FRECHETTE, M.D.
JOHN J. POUTAS, M.D., *Chairman*

APPENDIX NO. 14

REPORT OF THE COMMITTEE ON FINANCE

The Committee recommends, at the request of the officers of the Society, that the budget for the use of the delegates to the American Medical Association be increased by the sum of $600.

The committee also recommends a special appropriation of $250 for counsel fees in a court action brought against a former officer of the Society.

HENRY H. FAXON, M.D.
FRANCIS C. HALL, M.D.
FABYAN PACKARD, M.D.
BANCROFT C. WHEELER, M.D.
ROBERT W. BUCK, M.D., *Chairman*

APPENDIX NO. 15

Report of the Committee on Industrial Health

This report is informational.

The function of the Committee on Industrial Health is to strive to give better medical service to the industrial workers of the State. This medical service is delivered in the main by part-time physicians. There are in Massachusetts only 19 full-time physicians working in industry. To accomplish its aims the Committee has endeavored to set up a program of education. In 1949 we developed a program on industrial health, which was given on December 14. In this program we planned to aid hospitals, nurses, medical schools, physicians, state department employees, workmen, leaders of labor, leaders of management and insurance companies. The meeting was well attended, the program instructive, and the discussion fruitful. As the Committee was laying out the program for the next year the Program of the Council on Industrial Health of the American Medical Association has come before us. In this program the Society is urged to expand the practice of occupational medicine and surgery into county industrial health committees and to extend the work that the central committee is doing down to the level of the county medical society. All of this is in accordance with the eleventh plank in the American Medical Association twelve-point program, which was offered to meet the challenge and offset the need for socialization of medicine. During the past year a census of physicians interested in industrial medicine was begun.

To further the work of education it is proposed that during the coming year, through the Committee on Post-graduate Instruction, this committee will offer speakers equipped to furnish a suitable program to the local medical societies.

Henry C. Marble, M.D., *Chairman*

APPENDIX NO. 16

Report of the Committee on Council Rules and By-laws

The Committee presents the following change in the by-laws, which has been previously approved in principle:

Chapter V, Section 2 (a): In the first paragraph, after the word "residence" in the next to the last line, insert "or place of practice."

The Committee also presents for approval the following amendment to the by-laws:

Chapter IV, Section 1: In the first paragraph, after the comma following the word "medicine," delete the remainder of the sentence and substitute the following: "as well as the president and the past presidents of the American Medical Association, the president of the Massachusetts Medical Service, and the medical director of the Massachusetts Medical Service provided they are members of this Society."

Elmer S. Bagnall, M.D.
Albert A. Hornor, M.D.
Frank R. Ober, M.D.
Edward P. Bagg, M.D., *Chairman*

APPENDIX NO. 17

Report of the Committee on Benevolence

This report is informational.

The Committee on Benevolence herewith submits its first annual report. As contemplated in the discussion that led to the establishment of this committee in 1948, there has been very close association with the Massachusetts Medical Benevolent Society. Between January 18, 1949, and January 18, 1950, the Benevolent Society extended aid to 27 doctors or their families. The type of aid varied from payment of funeral expenses to the apparently successful rehabilitation of a physician under the shelter of a religious order. The amounts paid to each individual or family varied between $15 and $616. The total amount paid by the Benevolent Society was $8274.33. Of this, $4500 was forwarded by the Committee on Benevolence from its 1949 appropriation of $10,000; the remainder of the appropriation, $5500, was placed in a reserve account by the Treasurer, as directed by the Council at its October meeting in 1948. Present indications are that the call for relief in 1950 will be approximately that experienced in 1949.

Theodore L. Badger, M.D.
Robert W. Buck, M.D.
Eliot Hubbard, Jr., M.D.
Charles C. Lund, M.D.
Dwight O'Hara, M.D., *Chairman*

APPENDIX NO. 18

Report of the Committee on Cancer

This report is informational.

It is the policy of this committee to help promote and coordinate the activities of other organizations dealing with cancer rather than to carry out independent projects.

Members of the Committee have worked with the Massachusetts division of the American Cancer Society in publishing a second edition of the book, *Cancer, A Manual for Practitioners*. The first edition was published in 1940 and had been exhausted for several years. The new edition is a complete revision with many chapters added. The Massachusetts Department of Public Health has furnished funds to provide a copy for every registered practicing physician in the Commonwealth. Several thousand copies have been sold to health departments in other states.

The Committee has received a request from the Massachusetts Department of Public Health that a survey be made of the existing state-aided cancer clinics. A similar survey was made several years ago by Dr. Channing Simmons, and, as a result, many valuable suggestions were made to these clinics. Dr. L. S. Snegireff, of the Division of Cancer of the Harvard School of Public Health, will make this survey. He will report to this committee. He has been asked to find out whether these individual clinics are offering proper services in their communities, whether they can be improved and, if so, how, and whether any of them should be abolished.

The Committee has co-operated with the Massachusetts Medical Postgraduate Teaching Program and has helped obtain speakers on cancer for many of the sessions. We have found a great deal of interest in cancer among the physicians of the State.

Thomas J. Anglem, M.D.
Charles C. Lund, M.D.
Channing C. Simmons, M.D.
Shields Warren, M.D.
Ernest M. Daland, M.D., *Chairman*

APPENDIX NO. 19

Report of the Committee on Hospital and Professional Relations

This report is informational.

Since last fall, the Committee on Hospital and Professional Relations has been interested in the problem of organization of the hospital staff and liason with the administrator and the board of directors or trustees. In the discussion and approach to this question, we have had the assistance and cordial co-operation of the Committee on Administrative Practices of the Massachusetts Hospital Association — meeting with them as a joint committee.

This topic arose from a memorandum entitled, "Suggested Plan for Co-ordination of Medical Staff, Governing Board and Administrator of Hospital," prepared and presented by Dr. Vlado A. Getting last October before a joint meeting of the three committees of the Massachusetts Medical Association: Medical Economics, National Legislation and that of Hospitals and Professional Relations. It was claimed that in many hospitals in the Commonwealth liaison between the medical staff and the trustees was either lacking or accomplished through a third party — that is, the administrator; that in certain hospitals in the Commonwealth the relation between the medical staff and the trustees is dominated by "hand-picked" representatives from the medical staff and trustees; and that effective liaison between the medical staff, the trustees, the administrator and the superintendent of nurses would accomplish a better understanding of common problems, enhance the quality of medical care and reduce the cost of the services rendered.

After a general discussion by the Committee members, by Drs. Allen, McKittrick and Gallupe, president, president-elect and secretary, respectively, of the Massachusetts Medical Society, and Dr. Wilinsky, it was agreed that a study of these statements should be undertaken. It was voted "that a Committee composed of representatives of the Committee on Hospitals and Professional Relations of the Massachusetts Medical Society, the Massachusetts Hospital Association, and Drs. Bagnall, Getting and Hayden be constituted for the purpose of delineating the relation that should exist between the medical staff and administrative officials and bodies in hospitals in the Commonwealth and also that the president of the Massachusetts Medical Society formally advise the president of the Massachusetts Hospital Association of this action and request official participation."

The invitation to the Hospital Association was extended by Dr. Allen, and it was promptly accepted. The job was assigned to their Committee on Administrative Practices, composed of Dr. T. Stewart Hamilton, director of the Newton-Wellesley Hospital, Dr. Ensio K. F. Ronka, director of the Quincy City Hospital, Dr. Philip Bonnet, director of the Massachusetts Memorial Hospitals, and Dr. Norbert J. Wilhelm, director of the Peter Bent Brigham Hospital and president of the Massachusetts Hospital Association. Also included in this joint committee, at the request of Dr. Allen, were Dr. Dean Clark, director of the Massachusetts General Hospital, and Dr. Charles F. Wilinsky, director of the Beth Israel Hospital and president-elect of the American Hospital Association.

Two meetings have been held, and after a general discussion of the subject of staff-trustee-administrator organization and relation, it was voted that a questionnaire should be prepared to be sent to each hospital in the Commonwealth for information on its staff-trustee organization. It was also voted that an explanatory letter, prepared jointly by the president of the Massachusetts Medical Society and the president of the Massachusetts Hospital Association (now Mr. Warren F. Cook, director of The New England Deaconess Hospital) should accompany each questionnaire.

The questionnaire has been prepared and approved. The letter is being prepared, and the material will soon be ready for mailing. Compilation and study of the information received will require considerable time, but when completed should give some interesting facts concerning staff-administrator-trustee organization and relation from the hospitals in the Commonwealth.

JOSEPH A. HOLMES, M.D.
STORER P. HUMPHREYS, M.D.
HARVEY R. MORRISON, M.D.
DONALD A. NICKERSON, M.D.
SIDNEY C. WIGGIN, M.D.
ALBERT E. PARKHURST, M.D., *Chairman*

APPENDIX NO. 20

REPORT OF THE COMMITTEE ON MATERNAL WELFARE

This report is informational.

The Committee on Maternal Welfare of the Massachusetts Medical Society and the Division of Maternal and Child Health of the Massachusetts Department of Public Health have undertaken a five-year survey of all the maternal deaths in the State; 1949 was the first year of this survey. The purposes of the survey are: to determine exactly how many such deaths occur each year; to determine how many occur in hospitals and how many occur at home; to review each death in an attempt to ascertain the exact cause of death (to classify it as either preventable or nonpreventable and if preventable to assign the responsibility to either the patient or the physician, or both); as a result of the survey, the Committee will make recommendations, both general and specific, for changes and improvements in the practice of obstetrics; the results of the survey and the recommendations of the Committee will be published from time to time in the *New England Journal of Medicine*; this survey is not punitive, but educational, and it is the hope of the Committee that not only will the physician involved learn from his particular case but also that all physicians practicing obstetrics will learn from the periodic reports of all the cases, and will profit from the suggestions and recommendations of the Committee.

The chairman of this Committee is Dr. Duncan E. Reid, obstetrician-in-chief of the Boston Lying-in Hospital and professor of obstetrics at the Harvard Medical School. Dr. Arthur Edgelow, of Springfield, is in charge of investigating all the deaths in the western part of the State, including Worcester. Dr. Luke Gillespie, of Brookline, is in charge of investigating all the deaths in the eastern part of the State out to but not including Worcester.

Forty-nine maternal deaths were reported to the Committee and were investigated. This report is a summary and an analysis of the deaths. The Committee believes that there may be some deaths that were not reported, but the exact count cannot be made until the vital statistics for 1949 are published by the Secretary of State of the Commonwealth.

There were two meetings of the Committee, which reviewed the cases and attempted to determine the exact cause of death in these cases, to describe the deaths as either preventable or nonpreventable and, in the case of preventable deaths, to assign the responsibility to either patient or physician.

Analysis of forty-nine cases of maternal deaths in 1949:

1.	*Age* — Ages ranged from 18 through 46.		
	Teens		4
	20's		22
	30's		17
	40's		6
2.	*Color* — All patients were reported as white.		
3.	*Parity.*		
	Primiparas		17
	Multiparas		32
	Highest parity		9
4.	Delivered		39
	Undelivered		10
	Sections		8
	Nonobstetric operations		2
5.	*Obstetric operations.*		
	Twins		2
	Breeches		6
	Mid-forceps		1
	High-forceps		1
	Internal podalic version and breech extraction		1
	Manual removal of placenta		3
	Ruptured uterus		3
	Packing of uterus		4
	Repacking of uterus		1
	Inversion of uterus		1
6.	*Rh* —		
	There were 6 Rh − patients:		
	2 were unrelated to the death.		
	1 was a patient with a stillborn hydrops with separation of the placenta and hemorrhage.		
	1 was with hemorrhage.		
	1 was with aspirations of vomitus.		
	1 was with inversion of uterus and hemorrhage.		
7.	The deaths were classified as follows:		
	Unclassified as to preventability		2
	Nonpreventable		19
	Preventable		28
	Responsibility assigned to patient	2	
	Responsibility assigned to doctor	26	
8.	Autopsies		18
	Diagnoses:		
	Hemorrhage and shock		9
	Pulmonary embolus		7
	Anesthetic		6
	Inhalation	5	
	Spinal	1	
	Severe pre-eclampsia		4
	Eclampsia		3
	Premature separation of placenta		3
	Cardiac decompensation		2
	Peritonitis		2
	Anterior poliomyelitis		2
	Cerebral embolus		1
	Cerebral tumor		1
	Mesenteric and splenic thrombosis		1
	Acute yellow atrophy		1
	Acute inversion of uterus		1
	Septic self-induced abortion		1
	Subarachnoid hemorrhage		1
	Encephalitis		1
	Acute infectious myocarditis		1
	Collapse both lungs		1
	Waterhouse–Friderichsen syndrome		1
			49

DISCUSSION

Hemorrhage

In this series hemorrhage was by far the leading cause of death. Many of the deaths classified as being due to pulmonary or cerebral embolism were questionable diagnoses in

patients who had already had marked hemorrhage and shock.

The first impression of the investigators from reading the case histories and talking with physicians involved in the hemorrhage cases is that the physician underestimated the amount of blood loss and was not sufficiently worried soon enough.

The second impression was that too many physicians consider intravenous administration of fluids and plasma as adequate replacements for blood loss. In shock alone, unaccompanied by hemorrhage, fluids and plasma may be adequate but when hemorrhage has occurred, the only adequate therapy is blood and plenty of it.

The third impression is that in spite of hospital, Red Cross and state blood banks, there is often a long delay, often one or two hours, in obtaining blood once the transfusion or transfusions have been decided upon.

The fourth impression is that in most cases very little was done to prevent further blood loss. In only 4 of these patients was the uterus packed in an attempt to prevent further blood loss, and only in 1 was hysterectomy suggested. In no cases was it performed. The Committee believes that this is still a worthwhile and often a life-saving measure.

There are some bleeding patients who do not respond to any methods of treatment and continue to bleed not only from the uterus but from other locations in the body. These patients either have separation of the placenta, usually of the toxic variety, or have been carrying dead babies for some length of time. These patients have been found to have marked afibrinogenemia. The only effective method of treatment in this group is the administration of large amounts of fibrinogen intravenously. The Boston Lying-in Hospital has a supply of this, which will be made available to such patients.

Physicians are reminded that many patients who have been given plasma that has not been treated with such substances as nitrogen mustard often develop hepatitis, which may be fatal. Only plasma that has been treated to destroy the organism responsible for infectious hepatitis should be used in treating the shock of these obstetric patients.

Toxemia and Eclampsia

There is nothing too new or different in the general treatment of toxemia and eclampsia. There is a new and occasional life-saving measure for the oligurias and anurias associated with toxemia and separation of the placenta. That is the artificial kidney developed at the Peter Bent Brigham Hospital. That hospital is willing and anxious to accept oliguric and anuric patients and has saved patients who formerly would have died.

Anesthesia

There were six deaths due to anesthesia. Five of these were due to aspiration of vomitus and gastric contents, and 1 was due to spinal anesthesia. The Committee suggests that any patient who has had inhalation anesthesia and shows any evidence of respiratory distress should have bronchoscopy with suction of the bronchi as soon as possible, preferably within the next thirty minutes.

Amniotic Fluid and Emboli

At present this is a popular diagnosis made to explain many accidents of delivery and labor. This diagnosis was made several times but each time was disproved by autopsy. It was made most often in the cases of aspiration of vomitus. The Committee believes that this is a poor diagnosis to make, for it may divert attention from aspiration of vomitis, from pulmonary embolus, from cardiac failure, from pulmonary edema and from other conditions that may require other types of treatment.

DUNCAN E. REID, M.D., *Chairman*

APPENDIX NO. 21

REPORT OF THE COMMITTEE ON POSTGRADUATE MEDICAL EDUCATION

This report is informational.

During the past year postgraduate medical instruction has been conducted in twelve teaching areas identified as follows: Pittsfield, Springfield, Greenfield, Worcester, Lawrence–Haverhill, North Shore, Fitchburg, Lowell, Taunton–Fall River, New Bedford, Plymouth and Hyannis. In these twelve areas, there have been 43 exercises, the number per area varying from 2 to 7. In addition, the Committee has conducted 61 exercises in the Greater Boston area during March 6 to May 1, 1950.

In the teaching areas throughout the State, the interest and attendance has been excellent. In fact, we believe that this has been our best year. Our only concern is over the two areas where only two exercises each have been presented, but we believe this can be changed easily another year. The Greater Boston program has been well supported, but as anticipated there has been a definite reduction in attendance since the post-war period. In other words, we have now arrived at an attendance level to be expected in an area in which so many opportunities for postgraduate instruction prevail. Certainly the shift from Sanders Theater to Ware Hall has been justified.

If the plan of decentralization in the conduct of our work prevails, it may be desirable to add one or two more teaching areas that all corners of the State may be covered without asking any doctor to travel very far. These are matters of Committee policy, and it is suggested that any simple change of this sort be judged entirely on Committee experience.

In the past the problem of the number of meetings in any given area has been left entirely to the area representative or committeeman. Of course, it is understood that there are many education meetings going on throughout the State not under the direction of this Committee. However, we must not lose sight of the fact that the Society postgraduate meetings are open to all registered physicians, whether or not they hold membership in the Society. If we are to reach this group, the Committee is of the opinion that we should strive for at least four meetings for each teaching area.

We have had several conversations with the officers of the Massachusetts Chapter of the American Academy of General Practice. It should be known that members of this organization are required to take fifty hours of postgraduate instruction each year. It is the wish of the Committee to cooperate with this organization in every way possible. It does not seem advisable to have a designated representative of the Academy on our Committee, but Academy representation can be taken care of in other ways.

Education viewed abstractly is sufficiently uninteresting to justify an occasional change in technic. The present plan of dividing the rest of the State into teaching areas and offering a lecture course of several weeks in the Greater Boston area has been in vogue for five years. In general, the results have been good, and have been better this year than any previous year. The Committee is therefore encouraged to proceed. Nevertheless, a change in plan, especially if it does not disrupt the entire system, is worthy of some consideration.

At a recent meeting of the Committee it was suggested that we might try the scheme of inaugurating a lecture course similar to the Greater Boston Course but of much shorter duration somewhere in the western part of the State. It was further suggested that if this course were given in mid-September, we might obtain the buildings of the University of Massachusetts and thus offer overnight accommodations for doctors if they so desired. It is understood that all this would be done without any great expense. If such a plan were inaugurated, it would supplant the exercises now offered in the Pittsfield, Springfield and Greenfield areas.

Our present budget allowance is $3000. It was voted by the Committee to suggest no change. Of course, it is fair to state that the above allowance is not sufficient but that with assistance from other sources — for example, the Cancer Society and the Department of Public Health — we manage to get along.

To facilitate the business of setting up programs earlier in the teaching season, it was suggested that all district societies be asked to give some consideration to postgraduate programs at the time of the annual meetings of the district societies.

It is difficult to measure the results of educational programs, especially in the field of adult education. However, the Committee believes that the postgraduate medical program conducted by the Society is contributing in no small measure to improving medical care in this state, and is worthy of the co-operation and support of all physicians.

W. RICHARD OHLER, M.D., *Chairman*

APPENDIX NO. 22

Report of the Committee for the Red Cross Blood Program and Committee for the Regional Blood Center

These committees have had three meetings since the last report, and have met together each time. They have conducted a survey of how well the Red Cross Blood Program is working by writing to 235 hospitals in the State. The replies indicate that the program is, on the whole, satisfactory. Complaints came from about a third of the hospitals. They were concerned with the following: insufficient supply of blood; lack of co-operation from the local Red Cross chapters; and insufficient number of local depots.

Some of the hospitals were written to by the Committee. All the complaints were turned over to the Red Cross for action. A specific recommendation was made for establishment of a local depot in the Pittsfield area. Members of the Committee have helped to make the program successful by speaking at different local Red Cross and hospital meetings. They have divided the Metropolitan area's twenty-six subchapters into divisions for each one of which one member of the Committee would be responsible for medical and technical advice to aid in blood distribution and use, in the recruitment of donors and assisting with the problems of the local hospitals. The committees have undertaken to canvass the State to ascertain the desire of local hospitals for improvement of the safety of their transfusion services by further education of their technical and other personnel. Requests for free training, to be undertaken in some of the larger hospitals as a free service, have been received for about 65 persons. This program will start with a day of lectures and then be followed by a two-week program of individual training in all aspects of blood banking. To carry this out about three months will be required. To put this program on a permanent basis these committees have set up a Massachusetts Association of Blood Banks, the primary aims of which are for raising the standards of transfusion in the State by a permanent education program, meetings for scientific discussions and a structure for hospitals to help each other through exchange of blood. The committee agreed that the banks represented by the members should undertake to help the smaller hospitals in the metropolitan area with their bleeding, storage and technical problems, if the hospitals so desired it and were too small to maintain blood banks of their own.

These committees have received a recommendation from the American Association of Blood Banks that the Massachusetts Medical Society pass a resolution approving of the American Association of Blood Banks and do so in the form adopted by the State Medical Association of Texas. The copy of this form, which was enclosed with their letter, contains a paragraph specifically forbidding the entrance of a national agency — namely, the Red Cross — into blood collecting in Texas and further instructing the delegates to the House of Delegates of the American Medical Association to introduce a similar measure there. After some deliberation, these committees made the following recommendations to the Massachusetts Medical Society: that the American Association of Blood Banks should not be approved by the Massachusetts Medical Society; and that the delegates to the American Medical Association from this state be informed of the dangers of adopting the Texas resolution.

The reasons for this action are that it would mean an end to the Red Cross Program in this state. This program has provided to date 47,314 pints of blood free to patients. If this blood had been purchased at $25 a pint, it would have cost $1,182,850. It has made available over 10,000 pints of outdated or unusable blood for processing into plasma fractions, from which 62,320 units of gamma globulin have been distributed free by the State. It has made blood available in the smaller hospitals of the State where heretofore it was very difficult to get. It has been of immeasurable help to many indigent patients without kinfolks who could not procure donors. It is the only system now available for organized blood collection in case of a national emergency. It has made possible the maintenance of Dr. Cohn's research in blood fractionation, which is one of the most vital medical projects now in progress. These committees believed that the withdrawal of this program in this state would result in serious repercussions, not only from doctors but also from the public because of the benefits in reduction of the costs of medical care. They further believed that should the House of Delegates of the American Medical Association pass such a resolution, it would seriously prejudice many members of the lay public against doctors as being disinterested in patient expenses and vital care.

These committees further recommended that their memberships be combined to form one committee to be called, "The Committee for the supervision of the Red Cross Blood Program."

Lamar Soutter, M.D., *Chairman*

APPENDIX NO. 23

Report of the Committee on Diabetes

This report is informational.

The Diabetes Detection Program, which began in 1948, was continued during Diabetes Week, October 10-16, 1949, with considerable progress. Increasing interest on the part of other state societies and district societies was shown by the fact that since the fall of 1949 more than 250 diabetes committees have been formed in various state and district societies. A preliminary report for the country indicates that tests of 310,000 persons were made during Diabetes Week, exclusive of the very much larger number of tests made as an individual matter in doctors' offices for which no accurate summary is available.

In Massachusetts 10 district societies have diabetes committees actively at work. The participation of a considerable number of industries in the State has provided us with reports from 57 industries, indicating that 10,400 persons were tested. Actually, this program in various industries is continuing and is still in progress so that this report is far from complete. A significant departure was made this year in Massachusetts as in at least 4 other states with the attempt to make use of county fairs as a means of distributing information about diabetes and particularly carrying out testing programs. In many of these county fairs considerable proportions of the visitors come from rural or very small towns. The Hampden District Medical Society made a distinctive contribution to this program by organizing, with the co-operation of the Committee, the American Diabetes Association and the United States Public Health Service, demonstrations during the week when the Eastern States Exposition was held in Springfield. The committee of the district society obtained the co-operation of physicians who acted as demonstrators and the volunteers from the Woman's Auxiliary of the local hospital. The new apparatus, called the clinitron, was used in demonstrating the performance of blood sugar analyses at the rate of 120 per hour. This apparatus is a step in the direction of utilizing mechanical devices in carrying out laboratory work on a large scale and may have considerable significance for the future in hospital and laboratory work. If such mechanization can be further utilized, it may be a considerable factor in reducing the cost of laboratory work in hospitals. During the week of the exposition the clinitron was operated during periods of two hours after the noon meal and the evening meal to carry out tests on any volunteers. The report was sent to the local physician named by the patient. More than 1200 such tests were performed.

Plans for Diabetes Week, November 12-18, 1950, should lead to earlier organization of local efforts in the attempt to find the many persons with undiagnosed and untreated diabetes in the State.

Frank N. Allan, M.D.
George Ballantyne, M.D.
Eoline DuBois, M.D.
William Mason, M.D.
Joseph Rosenthal, M.D.
James H. Townsend, M.D.
Priscilla White, M.D.
Howard F. Root, M.D., *Chairman*

APPENDIX NO. 24

Report of the Committee on Fees

Because of the impending changes in the Blue Shield program, final deliberations of this committee were delayed. During the autumn of 1949 this committee met jointly twice with the Blue Shield Fee Committee. After the Coun-

cil had approved the new Blue Shield program, a meeting of the Committee on Fees met at the Harvard Club on March 6, 1950. Those present were Drs. Allen, Beetham, Duncan, Gallupe, Green, Hand, Hayden, McKittrick, Prather, Schall and Sweet.

For the information of the Council the following summary of discussion and sentiment of the members of the Committee is submitted.

There appeared to be an awareness among the majority of those present that there is a feeling of dissatisfaction on the part of some of the lay public with the charges for professional services. This is most obvious as it applies to surgeons' fees. It is recognized by the Committee that a relatively small part of this feeling is based upon pertinent examples of excessive charges that anyone would agree are above the limits of the patient's ability to pay. The actual number of these cases that have come to the attention of the Committee on Public Relations or the Committee on Ethics and Discipline, or of Dr. Charles Hayden, whose experience is limited to cases having to do with charges to patients covered in part by Blue Shield insurance, appears to be relatively small. Furthermore, as pointed out by Drs. Hayden and Gallupe, the vast majority of specific complaints result primarily from misunderstandings and are readily satisfied as a result of conferences between the patient and the physician. It was also pointed out that almost always the physician involved in these cases has been co-operative and anxious to make the necessary adjustment of the fee. In only a few cases has there been any failure of the physician to meet the demands of the patient by compromise.

Several members of the Committee voiced the opinion apparently held to a greater or lesser degree by others of the group that in general the physicians of this state have become oversensitive to the importance of the fee problem and have tended to bend over backward in an effort to avoid criticism. It was pointed out by some that this position is to be deplored, partly because it may lead to a false sense of the importance of the difficulty, which at most is not at present a large one, and partly because such a supine attitude might militate against the welfare of the profession by playing into the hands of the cranks and political protagonists of governmental control. It was agreed that the dignity of the profession demands that the physician be allowed to adjust these matters with the patient according to the time-honored equitable principles of the code of ethics of physicians.

Much of the discussion centered upon the position that the Society should assume regarding the publicizing of the fact that the Massachusetts Medical Society has for almost a century maintained a committee (the Committee on Ethics and Discipline) to hear complaints and deal with grievances that might arise among the lay public. It was agreed that the function of this committee transcends the mere adjustment of differences between physician and patient or the disciplining of physicians and that it should be made clear to all that one of its greatest fields of activity should be to assist the patient to overcome misunderstandings and aid in improving the doctor-patient relationship in all its aspects. It was agreed that the adjustment of difficulties arising over fees is in fact a small portion of its function. On the other hand, it was emphasized that because of the recent publicity regarding the so-called "grievance committees" of other state medical societies, the time has come for the Massachusetts Medical Society to carry before the public the fact that such a committee exists for its benefit in this state as well.

The hope of the chairman that some agreement might be reached regarding the over-all problem of the principles underlying the establishment of equitable charges for medical and surgical professional services was not realized. It seems that the time is ripe for the profession of this state and elsewhere to come to some agreement regarding the principles involved and that these should depend upon the consideration, among others, of the following factors:

The *value of the service*, whether of a definite and easily definable value such as the fees for certain laboratory examinations or of a relatively indefinite value such as the fees for anesthesia or the opinion of the roentgenologist, or finally of an indeterminable value such as the value to the patient of an unusual operation or any life-saving measure, either medical or surgical.

The *nature of the service rendered*, with consideration of the technical difficulties, the diagnostic complexity, the length of time consumed and the degree of responsibility assumed.

The *ability of the patient to pay*, with reference to his income, family responsibilities, and the effect upon future income of a long-lasting illness or an ultimately unfavorable prognosis.

If the Committee on Fees is held over for another year, these matters of obviously fundamental importance should be reviewed. Whether or not any general principles might be agreed upon or any recommendations of a more or less specific nature might be made regarding actual fees considered to be proper under various circumstances remains to be decided.

It should be pointed out on the basis of discussions in committee that the new Blue Shield schedule of fees should not be regarded as an absolute guide for charges to patients not covered by this insurance although it was agreed that in general it will be found to conform with the most equitable practice for patients whose incomes fall into the category now covered by Blue Shield.

After prolonged discussion the following recommendations were made for the consideration of the Council:

On motion of Dr. Prather, seconded by Dr. Schall, in order to avoid the misunderstandings and criticism on the part of the patient regarding fees. it was VOTED that the members of the Massachusetts Medical Society be encouraged in all cases to attempt to come to an understanding with the patient by free discussion of the exigencies involved in each case at some time before a bill for services is rendered to the patient.

On motion of Dr. Prather, seconded by Dr. Hand, it was VOTED to recommend to the Council that this committee is of the opinion that the attitude of the Society regarding fees and the availability of means for the patient to obtain relief from possible overcharging be publicized by the Committee on Public Relations in whatever manner it may choose to adopt.

RICHARD H. SWEET, M.D., *Chairman*

APPENDIX NO. 25

REPORT OF THE COMMITTEE ON REDISTRICTING

This report is informational.

A meeting of the executive committee of this committee was held on March 1, 1950, at 8 Fenway. To get opinions concerning the problem of redistricting, a questionnaire and a map of the districts of the Society is to be mailed to all fellows.

A letter was sent to all district secretaries, stressing the importance of the problem, and requesting that the matter be discussed at district meetings.

ALEXANDER A. LEVI, M.D.
BASIL E. BARTON, M.D.
DONALD HIGHT, M.D.
WILLIAM F. HICKEY, JR., M.D.
MILTON M. SISSON, M.D.
HAROLD R. KURTH, M.D.
CHARLES G. SHEDD, M.D., *Chairman*

APPENDIX NO. 26

REPORT OF THE COMMITTEE TO MEET WITH THE MASSACHUSETTS STATE PHARMACEUTICAL ASSOCIATION

This report is informational.

The Massachusetts State Pharmaceutical Association requested the Massachusetts Medical Society to appoint a committee to confer on problems of mutual interest, including socialized medicine, joint efforts of the pharmaceutical and medical professions with regard to health programs, and various other problems such as the prescription and dispensing of narcotics and other so-called dangerous drugs.

At meetings of the joint committee special attention has been given to two problems. The pharmacists pointed out that many physicians have apparently been not well informed about the regulations regarding the prescription of such things as barbiturates and Benzedrine, the refilling of prescriptions and the use of the label, "Warning — may be

habit forming," which druggists are required by law to place on a bottle of phenobarbital tablets under certain circumstances. It is expected that these matters will be brought to the attention of the medical profession through announcements in the *New England Journal of Medicine* and in other ways.

The second important matter concerned the objection of pharmacists to what they consider the participation of physicians in the drug business. The possibility that legislation might be promoted to restrict the dispensing of drugs by physicians is under consideration. The Committee is seeking information regarding the interest of physicians in this problem. We need to know how many physicians dispense drugs themselves and how many groups and hospitals dispense drugs without having a registered pharmacist.

The Committee would also like to know if there are any matters that the Council would like to have brought to the attention of the Pharmaceutical Association, including such things as participation by pharmacists in the practice of medicine by over-the-counter prescribing.

The Committee recognizes the mutual advantages of the contact that has been established between the Pharmaceutical Association and the Society and recommends continued co-operation.

CHARLES L. BRENNAN, M.D.
GEORGE L. MAISON, M.D.
FRANK N. ALLAN, M.D., *Chairman*

APPENDIX NO. 27

REPORT OF THE TREASURER

This report is informational.

During 1949 there has been some increase in the total revenue in the General Fund and a proportionately larger increase in the disbursements.

Income from annual dues in 1949 rose to $136,962 from $134,960 and that from nonresident dues to $2850 from $2514. Income from censor fees fell from $1053 to $900, while net profits from the Committee on Arrangements increased to $4695 from $3153 in 1948. The New England Postgraduate Assembly operated at a net loss of $420.

Income from the securities of the General Fund amounted to $7349 and from the Building Fund, $2317. There was a gain from sale of securities in the General Fund of $74 and a loss from sales in the Building Fund of $1792, largely from the disposal of 83 shares United Airlines common stock.

The book value of the securities in the General Fund stands at $220,737 and in the Building Fund at $93,748. The corresponding market values as of December 31st were $222,674 and $95,557 respectively.

The total revenue for 1949 in the General Fund was $153,638, an increase of $3640 over 1948. The total disbursements for 1949 was $138,763, an increase of $24,123 over 1948. The surplus of income over expenditures was therefore $14,875, which has been transferred to the Building Fund. The total assets of the General Fund remain pegged at $250,000.

The Building Fund has increased from a value of $94,678 to $121,398 owing in part to increase in stock-market values, which calls for an explanation. To the figure as of January 1 of $94,678 is added the income from Building Fund securities of $2317 and the surplus of $14,875 from the General Fund, while the loss from sale of securities, or $1792, must be deducted. This would bring the value of the Fund to $110,078. But in 1948 the market values of securities in both the General and Building Funds were below the book values and to compensate for this and to give a true liquidating value, reserves were held in both funds totalling $11,320. This year the market values have increased beyond the book values in each fund, with the result that these reserves can be released and the sum of $11,320 can be added to $110,078, bringing the actual value of the Building Fund as of December 31st to $121,398.

The Society ends 1949 with grand total assets of $416,343, an increase of $34,572 over 1948.

On advice of Loomis Sayles and Company, the following sales were made during the year — $18,000 American Telephone and Telegraph Company 2¾ per cent bonds due 1961; $9000 Peoples Gas Light Coke Company, 3's due 1963, 120 shares Cleveland Electric Illuminating Company common stock and 83 shares United Air-lines common. Purchases included $18,000 American Telephone and Telegraph Company 3⅛'s due 1959; $10,000 United States Treasury Certificates of Ind. 1¼'s due 1950; $10,000 United States Treasury 2½'s due 1955-52; 100 shares Public Service of Indiana 4.64 convertible preferred stock; 135 shares Consumers Power Company common; 20 shares Cleveland Electric Illuminating Company common (sold later in the year at a profit); and 30 shares Wisconsin Electric Power Company common.

It is a pleasure to announce the gift of $500 from a donor who insists on remaining anoymous to establish a graduation gift fund for the purpose of annually giving a prize of the approximate value of $25, together with a cerificate from the Massachusetts Medical Society, to three outstanding students selected by the Committee on Medical Education after consultation with the deans of the Harvard, Tufts and Boston University Medical schools. The gifts are to begin in 1950, and the principal of the fund to be so used until exhausted.

The $10,000 allocated to the Benevolent Fund has been used as follows: $4500 was advanced to the Massachusetts Medical Benevolent Society as its estimate of needs for the year; of this sum, $2502 was used, leaving $1995 to the credit of the Massachusetts Medical Society with them for operating in 1950. The balance of the $10,000, or $5500, has been invested in Savings Banks as the nucleus of the permanent Benevolent Fund.

In over-all perspective the regular trend toward more and more expenditures keeps pace. Disbursements in 1948 were $114,640 and in 1949, $138,763 and the budget for 1950 calls for $150,070 so far. The budget for 1949 called for $139,525, and this was only $762 more than what was actually spent. With an estimate of not more than $154,000 income for 1950, if the full budget were spent, it would leave a surplus of less than $4000 in 1950 as compared with a surplus of $14,875 in 1949.

There is no valid reason for maintaining a general fund as large as $250,000 beyond the benefit from the income therefrom but the Treasurer wishes to go strongly on record against the opinion that the principal of this fund be whittled away for current expenses no matter how urgent the cause may seem at the moment. This objection would not hold as to using a portion of the General Fund capital to complete the purchase of permanent headquarters since it would continue to be a tangible asset in the form of real estate.

A comparison of detailed expenses for 1948 and 1949 is appended.

DETAILED EXPENSES, 1949

	1948	1949
Salaries:		
Secretary	$8,300.00	$10,000.00
Executive Secretary	4,800.00	6,000.00
Treasurer	2,000.00	2,500.00
Assistant Treasurer	500.00	500.00
Director of Medical Information and Education	8,000.00	10,000.00
Expenses:		
President	338.51	259.35
President-Elect	2.95	0.00
Secretary	3,412.00	4,366.40
Treasurer	1,996.27	2,206.38
Director of Medical Information and Education	3,364.22	8,073.90
Delegates to American Medical Association	2,560.36	2,181.29
Cotting luncheons	290.00	365.00
Refunds to district societies	8,000.00	8,000.00
New England Council dues	100.00	100.00
Clerical work	6,145.00	(In General Administrative)
General Administrative (including $6,320.00 clerical work in 1949)	4,155.95	10,380.40
Shattuck lecturer	16.66	16.66
Donation to Boston Medical Library	26,675.00	26,440.00
Premium on pension plan	4,080.40	4,078.00
Publication of directory	0.00	3,250.00
To carry *New England Journal of Medicine*	5,000.00	10,000.00
Net loss sale securities in general fund	1,026.14	(Gain)
Taxes:		
Federal unemployment	59.49	61.74
Federal Old Age	198.31	205.74
Massachusetts Unemployment	535.39	102.87
Prior year Massachusetts Unemployment	2,364.90	None
Committees:		
Arrangements	Profit	Profit
Benevolence	0.00	10,000.00
Blue Cross–Blue Shield problems	0.00	75.00
Code publicity	0.00	26.40
Co-ordinating	0.00	79.54
Council Rules and By-Laws	66.24	833.38
Diabetes	0.00	153.37
Ethics and Discipline	43.92	76.63
Executive Committee	33.05	170.41

DETAILED EXPENSES, 1949 (Concluded)

Expert testimony	88.83	0.00
Headquarters	4,166.20	5,127.54
Industrial Health	41.87	765.77
Information Bureau	2,676.48	1,099.34
Legislation	4,536.15	4,771.49
Medical Defense	3,730.00	995.30
Medical Economics	0.00	198.37
Medical Education	0.00	76.50
Membership	66.11	57.82
Meet with Rehabilitation Center	27.19	0.00
National Emergency Service	213.55	0.00
National Legislation	0.00	547.17
New England Postgraduate Assembly	Profit	420.13
Pilot Clinics	0.00	Credit Balance
Postgraduate Education	4,499.50	2,666.07
Public Health	98.39	142.51
Public Relations	304.29	1,104.96
Publications	88.81	117.67
Redistricting	0.00	35.87
School Health	0.00	30.38
Tax-Supported Medical Care	36.31	104.63
	$114,640.44	$138,763.98

APPENDIX NO. 28

PROGRESS REPORT OF THE NEWTON HEART DEMONSTRATION PROGRAM

The first report of the Newton Heart Demonstration Program was presented to the Massachusetts Medical Society on May 24, 1949, at its annual meeting in Worcester. This is a progress report of the program's second year of activity.

The work of the past year has reinforced our opinion that there are public-health aspects to the problem of heart disease and that certain public-health services can help the physician offer optimum care to his cardiac patients; demonstrated that the community is vitally interested in the problem; and convinced us that the medical profession will cooperate in a community program for the control of heart disease, provided practical measures exist for the prevention of heart disease or its complications, the danger of frightening the public is minimal, and the effort can be medically controlled.

Through the Cardiac Program Committee and its subcommittees, Newton physicians have continued to share with the Health Department responsibility for the program's development. On their recommendation several new activities have been added. Others, initiated early in the program, have been discontinued or altered.

For example, temporary voluntary reporting was dropped since it did not contribute enough information to be of significant value in program planning. Action on a cardiac rehabilitation program has been postponed because of lack of specially trained personnel in the community. The attainment of community participation is being undertaken by the Newton Community Council with the entire Cardiac Program Committee acting in advisory capacity. The council, which includes representatives from 77 member organizations, devoted its annual meeting in April to discussion of the heart program.

At present the Cardiac Program Committee and its subcommittees are actively concerned with programs of physician education, nutrition (including weight control), prevention of subacute bacterial endocarditis, prevention of rheumatic fever, case finding and prothrombin determinations. It is interesting to note that all these activities were among the recommendations for community programs made by the recent National Conference on Cardiovascular Diseases, sponsored by the American Heart Association and the National Heart Institute.

Physician Education

The Newton Postgraduate Institute has continued to meet monthly. About 50 per cent of Newton's general practitioners attend regularly, including 12 of the 19 physicians known to have graduated from nonaccredited schools. The major problems of prevention, diagnosis and treatment of heart disease have been thoroughly covered by the following speakers: Dr. Samuel Levine, Dr. Benedict Massell, Dr. Howard B. Sprague, Dr. Paul D. White, Dr. Mark Altschule, Dr. Samuel Proger, Dr. T. Duckett Jones, Dr. Alexander Nadas and Dr. Egon E. Kattwinkel. All physicians practicing in Newton receive summaries of each lecture and the discussion period that follows.

Nutrition

An important outcome of a cardiac-diet study, carried on under the supervision of the suncommittee on nutrition, was recognition of the need for standardized cardiac diets — especially for cases of repeated cardiac failure. These diets have been prepared and will soon be ready for use by physicians, hospital dietitians and community nutritionists.

A weight-control study has shown the possibilities of the group-discussion technic in helping patients to reduce. In six months, 10 of the 12 subjects in the study group lost 12 pounds or more; 5 reached "ideal weight." We are especially concerned with the application of this method to the problems of the obese hypertensive or the potential cardiac patient.

Subacute Bacterial Endocarditis

A joint committee of physicians and dentists has been established to stimulate widespread use of procedures for the prevention of this disease. A schedule of penicillin prophylaxis, recommended for all patients with valvular and congenital heart disease undergoing dental, surgical and obstetric procedures, was developed. It was sent to all physicians and dentists practicing in Newton, along with cardiac identification cards provided by the Massachusetts Heart Association.

Rheumatic Fever

A program to prevent streptococcal infections among rheumatic-fever families was started early in the year. With the help of Drs. T. Duckett Jones, Benedict Massell and David Rutstein, a schedule of penicillin prophylaxis was developed and recommended to all physicians practicing in Newton.

To find rheumatic-fever families, so that they could be referred to their physicians for advice concerning prevention of rheumatic fever, questionnaires were distributed through the schools. For study purposes, free throat cultures and low-cost penicillin are available to private physicians for their rheumatic-fever families.

Case Finding

Real progress has been made in setting up a practical program of screening for heart disease. The program was developed by the subcommittee on case finding, and screening examinations are performed by public-health personnel. Three procedures are used: a brief cardiac history, blood-pressure recording and auscultation of the heart.

City, school and industrial employees have already been screened. Through the referral system, special care has been exercised to prevent the development of cardiac neuroses. When there are suspicious findings, the patient's physician is notified by mail. It is then up to the physician to decide whether, on the basis of his knowledge of the patient, the findings warrant referral for further examination. If so, the health department notifies the patient to see his doctor.

City-wide screening will begin in the fall. The plans are being made in co-operation with the community council.

Technical Aspects

The technical subcommittee of the Cardiac Program Committee is headed by the pathologist of Newton-Wellesley Hospital. At present he is training a technician in prothrombin determinations so that anticoagulant therapy may be more widely used in the prevention and treatment of thromboembolic conditions.

In addition to the medical committees, a Nursing Advisory Committee, composed of representatives of hospital and community nursing groups, has been appointed. They are studying cardiac nursing problems in the community. Recommendations for improving the nursing care of cardiac patients in Newton will be submitted to the Cardiac Program Committee.

During the past year, the hospital's cardiac clinic has been aided by grants from the Massachusetts Department of Health. The clinic provides diagnostic and treatment facilities for indigent patients. It now operates on a weekly, rather than a bi-weekly schedule, with a resident and a visiting physician in attendance.

The progress of the Newton Heart Demonstration Program has been gratifying, and the number of visitors to the program seems to indicate widespread interest in community programs for the control of heart disease.

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LEWIS G. ROBBINS, M.D.

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RED CROSS BLOOD PROGRAM SUSTAINED

A MINOR crisis in the course of the Red Cross blood program seems to have been precipitated by certain activities on the part of the American Association of Blood Banks. This organization, amazingly, has carried its opposition to the American Red Cross to the point of requesting the Massachusetts Medical Society to instruct its delegates to the recent meeting of the American Medical Association to vote against approving the Red Cross blood program.

The House of Delegates has in the past voted its approval of the program, although each year the Association of Blood Banks has attempted to obtain an adverse vote. This year the Association sought to gain its objective by putting pressure on many of the state medical societies to repudiate the Red Cross.

Several reasons have been given for this opposition. The directors of the blood-bank association apparently believe that the Red Cross may come into control of the local banks, although in each state the program is controlled by a committee of the state medical society. In Massachusetts, since this committee is made up of physicians directly associated with blood banks, it is actually the banks that control the program. It is charged that the program is a form of "socialized" medicine, but since it is supervised by the medical societies and blood-bank directors the threat does not appear to be particularly sinister.

Viewing the matter entirely in its relation to the good of the patient and the safety of the community, the program seems to merit universal support; certainly so in Massachusetts. To date, in the Commonwealth, it has freely supplied over 50,000 whole-blood transfusions, which, at current rates, would have cost patients one and a quarter million dollars. It has supplied free to physicians over 60,000 units of gamma globulin. It has supplied the great amount of plasma necessary to make the blood derivative program one of the best in the world. It has supplied blood to small hospitals and rural areas where transfusion was formerly almost impossible. It is at present the only available means by which blood can be provided on a nationwide basis in case of war.

The Council of the Massachusetts Medical Society at its annual meeting on May 15 unanimously rejected the request of the American Association of Blood Banks, and it is encouraging to learn that the anticipated resolution discrediting the Red Cross program was not even introduced to the House of Delegates.

In this regard the recently completed survey of blood banks in the United States and Possessions conducted by the Bureau of Medical Economic Research for the Committee on Blood Banks of the American Medical Association is particularly timely as providing the first comprehensive study to be made of this vital service.

THE DESTINY THAT SHAPES OUR ENDS

INVESTIGATION into the causes of acquired congenital anomalies antedates by far Gregg's[1] study of the effects of German measles that was published in 1942. The problem was clearly formulated more

than a century ago by Geoffrey Saint-Hilaire[2] in his three-volume work, *Des Anomalies*, published in Paris in 1836: "If . . . anomalous beings are created . . . according to natural laws; if their deviations are the effects of disturbances and adverse influences happening during the course of development; if their causes are only accidental — and of this there can be no longer any doubt — another subject for research presents itself, a subject important, immense and capital: the determination of causes." Although Dareste,[3] in 1877, proved the validity of Saint-Hilaire's hypothesis for lower animal life, Mendel's work overshadowed it and seemed to show that the matter was wholly one of genetics, of more theoretical than practical interest to physicians.

Until recently, therefore, little distinction was made clinically between the inherited defect and the defect acquired in utero. During most of this century the position of acquired congenital malformations was not unlike that of tuberculosis in 1880 before bacteriologic studies revealed the biologic cause and unity of phthisis, scrofula and *Perlsucht* and of interstitial keratitis and Hutchinsonian teeth. With the crucial observations in 1941 that established rubella as a cause of congenital cataract, deafness, heart disease and faulty dentition, Saint-Hilaire stood revealed as a trail blazer of stature equal to that of the monk who spent his moments of relaxation tending and observing garden peas in his backyard.

In this issue of the *Journal*, Ingalls describes progress that has occurred along the trail during the century and a quarter since Saint-Hilaire set out to determine the causes of double, anencephalic and cyclopic monsters and the lesser defects that affect mankind. Biologic unity is at last being restored to a heterogeneous collection of acquired congenital anomalies that are now seen as a phylogenetic series of deformities, not as a number of unrelated entities. Elsewhere Ingalls and his coworkers[4] have described a laboratory method by which this concept can be submitted to experimental study within a system that appears as suitable for objective study of the laws governing the formation of acquired anomalies as the apparatus used to determine Boyle's law for gases. Pregnant mice are introduced into an atmosphere deficient in oxygen at selected stages of gestation, and the result of the anoxic insult on the fetus is observed. Anencephaly and cleft palate followed anoxia produced on the eighth and fourteenth days, respectively, of intrauterine life. The quantitative approach that is brought to the problem of congenital anomalies is the important feature of the method. Opportunity is provided for measuring the contribution to defective growth of both the causative agent (anoxia) and the changing fetus. The degree of anoxia and duration of exposure (dosage factor) are easily regulated. Once the critical conditions for the development of a particular defect have been determined, the mechanism of its pathogenesis can probably be reconstructed biochemically and histologically. An evaluation of the role played by genetic properties of the host is also favored. The future direction of such research is clear. It lies along the trail opened by Saint-Hilaire, which will doubtless be found to crisscross with the highway first surveyed by Mendel.

References

1. Gregg, N. M. Congenital cataract following German measles in mother. *Tr. Ophth. Soc. Australia* **3**:35-46, 1942.
2. Saint-Hilaire, G. *Des anomalies*. Vol. 3. Paris: Bailliere, 1836.
3. Dareste, C. *Recherches sur la production artificielle des monstruosités ou essais de tératogénie expérimentale*. 304 pp. Paris: C. Reinwald & Co., 1877.
4. Ingalls, T. H., Curley, F. J., and Prindle, R. A. Anoxia as cause of fetal death and congenital defect in mouse. *Am. J. Dis. Child.* **80**:34-45, 1950.

PRECIPITATION OF POLIOMYELITIS AS A CLINICAL ENTITY

Widespread dissemination of the virus of poliomyelitis — first indicated by clinical and epidemiologic observation, later substantiated by immunity tests indicative of previous exposure to the virus and finally established by the detection of virus not only in paralytic, nonparalytic and suspected abortive cases but also in healthy persons — definitely fixes poliomyelitis for the most part as a subclinical immunizing infection, and paralysis as an exceptional complication of the infection.

Whatever factors, in addition to exposure to the virus, determine the paralytic complication are in general unknown, but in exceptional cases circumstances in the host rather than circumstances of exposure to the virus that determine the out-

come of infection have come to light. From an epidemic of 375 cases of poliomyelitis in Victoria in 1949, McCloskey* reports that of 340 cases investigated 33 followed injections of pertussis vaccine, diphtheria toxoid or typhoid-paratyphoid vaccine within sixty days, 30 of them within thirty days and of these, 21 between seven and fourteen days. In addition, there was an extraordinarily high degree of localization of paralysis in the extremity in which the prophylactic injections had been made. Thus there is a striking similarity between this observation and the occurrence of poliomyelitis following tonsillectomy in which the interval between the operative procedure and the onset of the bulbar form of the disease is in the majority of cases between seven and fourteen days.

Clinically, the cases associated with recent immunization were indistinguishable from the remaining cases of poliomyelitis seen during the period. Any suggestion that the prophylactic agents were contaminated or were otherwise responsible in themselves for the occurrence of these cases seems to be ruled out by the fact that no single batch of any one product could be incriminated and that the products used had come from three widely separated sources. Furthermore, the same immunizing agents had been used throughout Australia, whereas the cases in question occurred only in Victoria during a severe epidemic of poliomyelitis. Any harmful effects were therefore associated not with the origin of the products used but with the epidemic prevalence of poliomyelitis.

Ample precedent for the precipitation of severe disease of the central nervous system by what are ordinarily simple and seemingly remote circumstances is seen in postinfectious and postvaccinal encephalitis. One theory of postvaccinal encephalitis is that it is a result of the detonation of an unknown but latent neurotrophic virus in the patient by vaccination. Therefore, there is reason for believing that procedures as simple as the injection of diphtheria toxoid, pertussis vaccine and typhoid-paratyphoid vaccine could similarly detonate a poliomyelitis infection that might otherwise have remained as only a subclinical immunizing infection.

Corroboration of McCloskey's findings in other proved cases of poliomyelitis would add to an accumulating list of factors in the host that determine paralysis in only a small portion of those who come to be infected with the virus. Recognition of such circumstances as factors that play a role in the epidemiology of paralysis in poliomyelitis would offer a practical means of prevention in those areas and at times when the virus of poliomyelitis is known to be in dissemination — that is, when the disease is epidemic.

THE CHANGING ROLE OF PRIVATE PHILANTHROPY

President Chester I. Barnard's† review of the activities of the Rockefeller Foundation in 1949, in addition to enumerating grants that would once have been considered large, emphasizes significant trends in the present role of private philanthropy abroad and at home. "Profound political changes" forced the Foundation to abandon important projects in certain countries under the domination of Soviet Russia (Poland, Czechoslovakia, Hungary and China), and private support of research and education no longer represents the main (or even an important) source of revenue in these fields. In the words of its president, the Foundation has been sharply awakened to "the discrepancy between the resources of privately endowed organizations . . . and the magnitude of funds needed today for large-scale research or educational enterprises." The money formerly allocated to projects in countries behind the Iron Curtain has had to be expended elsewhere, and the slack between the resources of private philanthropy and the budgetary needs of scientific, educational and social institutions is being increasingly taken up by governmental grants.

Both trends probably represent what may be expected for some time to come: the expansion of Russia gives no indication of ending in the predictable future, and the lavish grants of the United States Government are likely to be sought by — and awarded to — more and more institutions. Thus, for better or worse, organizations like the

*McCloskey, B. P. Relation of prophylactic inoculations to onset of poliomyelitis. *Lancet* 1:659-663, 1950.

†Barnard, C. I. *The Rockefeller Foundation: A review for 1949.* 85 pp. New York: Rockefeller Foundation, 1950.

Rockefeller Foundation are being forced to accept a minor part in a field in which they were once outstanding (the Foundation's appointments to fellowships for study abroad constituted hardly 2 per cent of the 15,070 awards offered in 1949, and those of Government agencies 62.5 per cent). Nevertheless, the projects supported by the privately endowed institutions are of undiminished value. Until the fully developed and all-encompassing welfare state has taken firm hold, private philanthropy will continue to fill a vital need in the United States and in the world; endowments from this source, administered without the waste and inefficiency that seem to be the inevitable accompaniment of bureaucracy, will continue to be welcomed by institutions fortunate enough to remain off the cultural dole.

It has become a proverb, not only in the profession, but out of it, that it requires from five to ten years starvation before the young physician can support himself upon his collected receipts.
Boston M. & S. J., *July 17, 1850*

MASSACHUSETTS MEDICAL SOCIETY

MIDDLESEX EAST CENTENNIAL

As an appropriate and valuable memento of the centennial of the Middlesex East District Medical Society, a brief but thorough history of the Society has been published. This book of 74 pages has been prepared by a committee with Dr. George A. Marks as editor-in-chief and Dr. Angelo L. Maietta as associate editor.

DEATHS

Hutton — Willis A. Hutton, M.D., of Longmeadow, died on June 27. He was in his sixty-eighth year.

Dr. Hutton received his degree from McGill University Faculty of Medicine in 1913. He was a fellow of the American Medical Association.

His widow, a son, a brother and two granddaughters survive.

Walker — I. Chandler Walker, M.D., of Fryeburg, Maine, died on June 17. He was in his sixty-eighth year.

Dr. Walker received his degree from Johns Hopkins University School of Medicine in 1909. He was a member of the Association of American Physicians and the American Society for Clinical Investigation and a fellow of the American Medical Association.

His widow and two sons survive.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

COMMUNICABLE DISEASES IN MASSACHUSETTS FOR MAY, 1950

Résumé

Diseases	May 1950	May 1949	Seven-Year Median
Chancroid	0	4	2*
Chicken pox	1866	2228	2228
Diphtheria	15	41	21
Dog bite	1485	1443	1289
Dysentery, bacillary	6	4	8
German measles	521	1243	381
Gonorrhea	175	254	340
Granuloma inguinale	0	0	0*
Lymphogranuloma venereum	0	0	1*
Malaria	0	2	12
Measles	2312	2327	2327
Meningitis, meningococcal	3	3	7
Meningitis, Pfeiffer-bacillus	3	3	2
Meningitis, pneumococcal	1	0	4
Meningitis, staphylococcal	0	1	0
Meningitis, streptococcal	1	0	1
Meningitis, undetermined	10	2	3
Mumps	994	1057	1095
Poliomyelitis	0	10	1
Salmonellosis	11	2	6
Scarlet fever	695	649	908
Syphilis	95	216	388
Tuberculosis, pulmonary	198	234	248
Tuberculosis, other forms	14	22	18
Typhoid fever	1	6	2
Undulant fever	0	4	4
Whooping cough	657	389	495

*Six-year median.

Comment

Diseases above the seven-year median were dog bite, German measles, salmonellosis and whooping cough.

Diseases below the seven-year median included chicken pox, diphtheria, mumps, poliomyelitis, scarlet fever, tuberculosis and undulant fever.

This is the first May in which no cases of undulant fever were reported since 1931. Whooping cough was at its highest prevalence for this month since 1945. This was the fifth consecutive month in which it exceeded the seven-year median.

Salmonellosis was at a comparatively high level for the season.

Geographical Distribution of Certain Diseases

Actinomycosis was reported from: Somerville, 1; total, 1.

Anthrax was reported from: Lynn, 1; total, 1.

Diphtheria was reported from: Boston, 7; Brookline, 1; Cambridge, 1; New Bedford, 1; Peabody, 1; Revere, 1; Somerville, 1; Westford, 1; Winthrop, 1; total, 15.

Dysentery, bacillary, was reported from: Boston, 1; Cambridge, 2; Fall River, 1; Worcester, 2; total, 6.

Encephalitis, infectious, was reported from: Fitchburg, 1; Franklin, 1; Needham, 1; Worcester, 2; total, 5.

Lymphocytic choriomeningitis was reported from: Boston, 1; Brockton, 1; total, 2.

Meningitis, meningococcal, was reported from: Boston, 3; total, 3.

Meningitis, Pfeiffer-bacillus, was reported from: Boston, 1; Medford, 1; Salem, 1; total, 3.

Meningitis, pneumococcal, was reported from: Boston, 1; Cambridge, 1; Lowell, 1; total, 3.

Meningitis, streptococcal, was reported from: Oxford, 1; total, 1.

Meningitis, undetermined, was reported from: Belmont, 1; Clinton, 1; Georgetown, 1; Hardwick, 1; Manchester, 1; Oxford, 1; Pittsfield, 1; Salisbury, 1; Springfield, 1; Worcester, 1; total, 10.

Salmonellosis was reported from: Boston, 1; Lowell, 3; Lynn, 1; Newton, 6; total, 11.

Septic sore throat was reported from: Arlington, 1; Boston, 5; Fitchburg, 1; Medford, 1; Westford, 2; total, 10.

Tetanus was reported from: Cambridge, 1; total, 1.

Trichinosis was reported from: Boston, 1; total, 1.

Typhoid fever was reported from: Whately, 1; total, 1.

MISCELLANY

CHARLES H. HOOD DAIRY FOUNDATION

In 1930 Mr. Charles H. Hood, son of the founder of the dairy firm of H. P. Hood and Sons, Inc., celebrated the completion of fifty years in the dairy industry by putting aside certain grants of money to be used for various charitable purposes. In 1942 the Charles H. Hood Dairy Foundation was established to administer the program made possible by these gifts.

The annual report of the Foundation for 1949 not only gives in detail the program for the advancement of dairy farming supported by these grants, but indicates also the still greater program for the advancement of child health. Financial assistance was then given to the Children's Hospital for research in hematology, to Dartmouth Medical School for research in nutrition, to the Committee for the Improvement of Child Health of the American Academy of Pediatrics, to a summer camp program, including camp care of children with psychiatric problems, to the psychiatric unit of the Boston Floating Hospital, to the Department of Nutrition and Biochemistry of Tufts College Medical School, to the New England Medical Center for research in hematology, to Simmons College for graduate scholarships in the schools of nursing and home economics, to Forsyth Dental Infirmary for orthodontic research, to Tufts College Dental School for research in the relation of soil chemistry to dental caries, to the Harvard Medical School for research in metabolic changes during pregnancy, and to the Children's Medical Center for research in social factors affecting child health.

MASSACHUSETTS CHAPTER OF NATIONAL MULTIPLE SCLEROSIS SOCIETY

A Massachusetts chapter of the National Multiple Sclerosis Society has been formed. In addition to a board of distinguished lay citizens of Massachusetts, there is a medical advisory board, composed of the following members: Drs. Leo Alexander, James B. Ayer, Wilfred Bloomberg, G. Colket Caner, Edwin Cole, Derek E. Denny-Brown, John B. Dynes, Otto F. Ehrentheil, Joseph M. Foley, Daniel Funkenstein, Harry L. Kozol, Roger I. Lee, Julius Loman, Merrill Moore, Raymond Morrison, Paul Myerson, Fred Quadfasel, Francis M. Rackemann, Augustus S. Rose, Maurice H. Shulman, Samuel Tartakoff, Henry R. Viets and Rosalind L. Herrmann.

Dr. Alexander is serving as temporary chairman pending further organization of the board.

Funds are to be made available for research in multiple sclerosis, and it is suggested that medical schools, hospitals and other scientific investigators interested in research in this most challenging and hitherto not successfully explored disease write to the Board outlining plans and amount of funds required for carrying them out.

CORRESPONDENCE

WHAT PRICE SERVICE?

To the Editor: A recent vote of the Committee on Ethics and Discipline of the Massachusetts Medical Society said in effect that "good doctors" on a fee-for-service basis do not charge for time spent with relatives or friends of a patient in discussing environmental problems of diagnostic importance connected with the case, or in outlining details of treatment too important to be left to the patient alone. Throughout my forty-three years of practice I have always made charges for such services. That such work is worthy of financial reward is well established by the tremendous amount of money expended on social-service workers for just such purposes. It might well be said that one would not be a "good doctor" if he did not put in enough time with relatives and friends of a patient to make a charge proper for the time thus spent.

This brings up a point regarding the fee-for-service in our Blue Shield program that I believe calls for serious consideration. At present payment for medical work is made on the visit basis, whether a minute or an hour is spent on the visit. Also, no provision is made to reimburse the doctor in a private case for work that the social worker is paid for in a charity case and is well known to be of importance for the patient's welfare.

Although methods of reimbursement of the physician by other than fee for service are steadily gaining headway, the fee-for-service method will undoubtedly persist for a long time. If so, is it not about time to make the fee dependent upon the amount of time and thought put into the problem from all angles, including time spent without the patient's actual presence?

CHANNING FROTHINGHAM, M.D.

Boston

BOOKS RECEIVED

The receipt of the following books is acknowledged, and this listing must be regarded as a sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits. Additional information in regard to all listed books will be gladly furnished on request.

Genetic-Statistical and Psychiatric Investigations of a West Swedish Population. By Torsten Sjögren. 8°, paper, 102 pp., with 20 tables. Copenhagen, Denmark: Ejnar Munksgaard, 1948. 15 Dan. Crowns. (*Acta Psychiatrica et Neurologica*, Supplementum 52.)

On Post-Infectious Nervous Involvement and Related Disorders of Spontaneous Origin. By Folke Möller. 8°, paper, 187 pp., with 5 plates. Lund, Sweden: Hakan Ohlssons Boktryckeri, 1949. (This work also appears as a supplement to *Acta medica Scandinavica*; from the Army Hospital, Solleftea, Sweden.)

The Occurrence of Post Infectious Nervous Complications and Allied Disorders in Sweden. By Folke Möller. 8°, paper, 59 pp. Lund, Sweden: Hakan Ohlssons Boktryckeri, 1949. (*Acta medica Scandinavica*, Supplement 224; from the Army Hospital, Solleftea, Sweden.)

NOTICES

ANNOUNCEMENTS

Dr. Michael A. Dean announces the opening of his office for the practice of general surgery at Professional Building, 881 Lafayette Street, Bridgeport, Connecticut.

Dr. Leon G. Michell, 2nd, announces the opening of his office for the practice of general surgery at 18 Broad Street, Lynn.

SOCIETY MEETINGS AND CONFERENCES

JANUARY 9–DECEMBER 1. Laboratory Courses at Communicable Disease Center, Atlanta, Georgia. Page 950, issue of December 8.

JULY 17–22. International Congress for Scientific Research. Page xvii, issue of September 1.

AUGUST 21–26. International Society of Hematology. Page 888, issue of December 1.

AUGUST 28–SEPTEMBER 1. American Congress of Physical Medicine. Page 428, issue of March 16.

AUGUST 31–SEPTEMBER 7. World Federation for Mental Health. Page 306, issue of February 23.

SEPTEMBER 3–9. International Heart Congress. Page 160, issue of January 26.

SEPTEMBER 7–9. All-Austrian Congress of Physicians. Page 994, issue of June 22.

SEPTEMBER 14. Progress in the Management of Hand Injuries. Dr. Henry E. Marble. Pentucket Association of Physicians. 8:30 p.m. Haverhill.

SEPTEMBER 27. American Medical Writers' Association. Page xi, issue of July 13.

SEPTEMBER 27–29. Mississippi Valley Medical Society. Page 991, issue of December 15.

OCTOBER 12–14. American Association of Blood Banks. Page 428, issue of March 16.

(*Notices concluded on page xiii*)